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VITICULTURAL PAPER IN THE STATE. THE ONLY

Devoted to Viticulture, Olive Culture, and other Productions, Manufactures and Commerce of the Pacific Coast.

VOL. XX, NO. 1

SAN FRANCISCO, APRIL 13, 1888.

PRICE 15 CENTS

Wine and Brandy Making as a Profession.

(The following paper was real by H. A. Mirriam, of low testes, before the Sexte Almord Convention of Vite alturists, and under the mapiles of the State

Mr. President, Ledies and Gentleman; Some time ago when invited by the State Board of Commission is to contribute a paper on some topic pertaining to the industry, I was surprised into consenting, choosing for my subject, "Wine and Brandy Making as a Profession " On sober second thought 1 was tempted to back out, when 1 considered the broad field I had undertaken to traverse and many abler men among von who are far more competent to do the the subject jistice. However, I'll give you the result of my feetle efforts.

In this days of light attainments when college bred men are disting about them for ways and means of making such use of their classical or liberal education, as will build thems lyes up in the social and political world, some profession is the first thing to discle upon. This most commonly thought of are law, moditine, purmulism and theology. Of the first, the ranks are full of graduates, and the law-schools are overflowing with students, all actuated by the hope of sometime, somewhor reaching the top of the halber, where Daniel Webster said there was noom, As with $\mathbf{law},$ with the office profession in attorned The ranks are always getting fresh recruits and strong revolute ments from the lest material in the land, and of these thousands who fill these ranks how many struggle for years and affast give up the battle and doft away the balance of their lives.

If these professional men had been asked if they thought wine and brandy making a profession, we should have answered, No. I doubt mys If it it has ever been digmited. by that term I force And yet why shouldn't it be, and why isn't it as grand and honorable a profession as any? Is it that there is no such skill needed in making wine and brainly as is needed by a lawver in conducting a difficult case before the the courts? Is it that there is no such call for patience and watchfulness as is needed. by the physician? Or is it, that in our butiness, we have no use for the mass of information that is needed by the journalist who aims to gratify the world's appetite for news. Are none of these requisits nec I for wine and brandy making. Do you sup- trunchal three

essary in making wine and brandy! Ave. all these and much more.

A college folloation whether liberal or classical is not too good to be used in the successful prosecution of this business. The most eminent jurists in the land, had they devoted the same number of years to the study of this business in all its phases, as is given their other profession, would find they had not exhausted the subject. On the contrary they would find that all their skill and knowledge would be taxed to its utmost in looking after the numerous details of the business. In the beginning, consider the amount of knowledge necessary in selecting your land, location, soil, variety of grapes, the adaptability of your particular section to certain kind of grapes, the relative merits of Zin, Carigan and Cabernet, of Chassales, Sauvig non and Semilion, of the advantage of foothill over valley land. Isn't there material for study in all this.

Assuming then that all these preliminary steps are taken and you have a vineyard in full bearing, the next step is the cellar and distillery, here, then, is another call for more knowledge of a different kind You will say let the architect attend to the plan for the building, the foundation, the dramage and sewerage system that is necessary. Let the carpenter or contractor devise ways and means for putting everything into position for, they know not what, as many of them never saw a drop of wine made, and there are thousands of little details that are never put into the plan and specifications of the architect that are absolutely necessary to do the work quickly and economically. You all know some thing of the cost for extrasthat always ring in over and above the contract price. me it seems as much a part of the profession as any of the work. This planning a building in accordance with the lay of the fund, and the amount of money to be expended, the superintending of the carpertor work so as to make every day count, getting all the machinery of the right sizand in the right place, and the whole speeded up just right, all this forms a study that cannot be learned in one menth or one year, but it is part of the profession, and to barn even this part of it requires. hard work and harder study.

Having the cellar built and a crop like ! the vintage of '57 coming in, you are ready.'

pose any lawyer or doctor has anything more difficult to handle than a bad fermentation with all the cyils following in its track: I doubt if they have; and yet, I have heard men say, "O, pshaw! anybody can make wine, all you have to do is to ernsh the grapes into a tank and the wine will make itself."

In that one word fermentation there is food for thought and study that will exercize the best brains of any man, be he college bred or not.

We know as a natural result of crushing a mass of grapes together into a tank that in a few days or hours fermentation begins, that is, that carbonic acid cas and heat is geterated and that our must is fermenting. But who has yet gone deep enough into the subject to "tell all there is to be learned about the growth and decay, the production and reproduction of the ferment germ, this living atom, or minute organism, that by some mysterious process in a few days converts the 22 or 24 of sugar in our must into spirits, and thus gives us wine instead of must.

Isn't this subject as worthy of study as the study of Grock or Latin? Don't it take as much brains and intelligence to master this one subject, as it does to master the Greek roots or the Latin conjugations:

Again I find a great diversity of opinion among abbest with makers as to the best method of handling the must during a fermentation. Some advocate the false head or burrel cover for submerging the pomaer, others will have none of it,

Some ferneant with the stems, others do not, some do this thing, others that which is right. Is there anything to study here? And when your ferm utition steps before the ware is day, what do you do, crush for intellegence? What make the differfreshighapes. Bug is if you can get them, into a tank and when they have started, pump your stuck wine onto them, how much, how little. Some do this when they suppose you have no room and few freshoublest men in California, and one study isn't there

wine and a half wine, how many men in I found that cultivating the sense of smell the lossiness have finally enlived a tastes enough to fell what constitutes those substitutivity is eternal vicibane, so is the makthe delicate shades of difference, is it the ing of fine brandy the result of constant, bouquet . for, or thavor, or is it a combina- careful withfulness, and as a study, I find

If, as we are bid to believe, Prance is in her decadence as a wine producing country, what more natural than that the mantle should fall upon our Golden State. If it should are we all ready for it, should we sell direct to France or should we sell to her customers. It strikes me here is a pretty broad fold for study.

A thorough knowledge of book-keeping is essential, as all business men know, a knowledge of foreign language is of great advantage, and some knowledge of international law a necessity. Is it the antique that is sought? what more ancient than the vine, it was centuries old before English jur-spondence was thought of. Is it the postical or practical you would study, what study, what subject has had more changes rung on it in postry and sentim ut, in prose and practice, than the vine.

Take for instance, the introduction of the vine into France, its beginning is lost in the mists of antiquity, and its history is written in 1-tt-rs of blood and fire.

Time and again are the vineyar ls I vastated by the Goths and Vandals, by the Norman and Hungarian, and time and again are they wrested back by the chergetic Gaul, but times indeed were hard for the vine dressers, when castles were springing up all over the land, when might made right, and the rule of the strong hand was the law of the land, and this was the history for centure's.

Is there anything in the penderous leve of other professions more worthy of study, or of greater interest than all this, tracing, step by step, and century by century, the different methods tried and the different results that followed.

In the distillery is there anything worth studying that calls for skill, for science, or once between a good brandy and a fine Herandy, the principle of distillation is all the same

Some years ago when taking my untatory have the grapes, and if works well, but steps in this business under one of the grapes, what then, chance here for more [grandest men in the country, I was teld to objects my nese, the idea was so futny it What is the difference between a good made me bough, but as day by day passed, was nothing to laugh at As the pare of lit to be very interesting

The comparison, one week with another, of the product of the distillations of wash or wine, as the case may be, knowing the strength of each change from test distillatious and keeping a record of the same, weighing each package as it is filled, and finding out the number of proof gallons in each charge whether of singling or high proof spirits, filtering and reducing, and during the distillation, watching the steam gauge and keeping the steam even, not five pounds too much or five pounds too little, but just right, a little wood now, a little water in a few minutes, a shade more or less draft, this keeps the steam right, and all the time trying the spirits with your nose, to tell just when you have gotten all that your judgement tells you should be put into your brandy tank.

As in the cellar, so in the distillery there is a diversity of opinion about the manufacture of brandy, some will run everything out, faints, fusil oil and aldehydes all go. and this is brandy. Others will claim they have discovered a process, where by an ingenious arrangement of pipes and chambers they can at one change eliminate every trace of fusil oil and run their product out to the last drop, or until their hydrometer tanks minus zero.

While others less fortunate only take the old way, and try to get enough to keep Uncle Sam from calling for a new survey and raising their capacity.

A proof gallon 100% of what, spirits? not entirely, 50% of absolute alcohol and 53,71% of water this makes 100%. That is, it takes 50 gallons of spirits and a fraction over 53% gallons of water to make 100 gallons of brandy at proof. This is caused by the decrease of volume just as clear as can be, isn't it? The only theory I have for this is, that the spirits being composed of larger globules than the water, when comhined, the smaller globules of water so fit into the interstices between the globules of the spirits that some three gallons are lost, as you may say. If this don't account for it, I shall have to study some more on it.

Is it any study to know whether your distillery is making time or not; whether you are overrunning your capacity, or coming out behind; whether your wash is too strong to be classed as such, or your wine too weak for wine? How many have recourse to a revenue broker to keep their books straight! How many have lost hundreds of dollars and endangered their whole plant by a want of knowledge of these things!

If wine-making was nothing more than crushing your grapes into a tank, and getting them through a fermentation after a fashion, then selling the wine right off the lees without a racking; if brandy-making was nothing but to get your charge into the still and turning on steam, and taking everything that comes from the worm, feints, fusil oil and aldehydes-as some have done, to my certain knowledge-then it were worse than folly to waste time on the business. Aside from the thousands of intricate, complex questions forever arising about the manufacture and care of wine and brandy, the fining and blending of the wines, there are questions of legislation to be acted on, questions that require not only a thorough knowledge of the business, but a knowledge of men, of law, and of diplomacy. There are issues at stake that involve not only your own peace of mind, but the safety of the hard-earned dollars you have invested in the business.

the interests of viticulture, and demand that right of protection which they would deprive as of; and by your thorough knowledge of the business, and cloquence, compel them to hear and grant your petition? Is it nothing to enter the field and prove to the world at large, and to prohibitionists in particular, by your force of argument and the inherent consciousness of right, that ours is not the dishonorable business they assert it is. Prove to them that there is as much temperance, intelligence and refinement in our ranks as in any profession, and that wine properly drunk is the b st of temperance advocates.

For myself, comrades, the' born and reared in the State of Maine, under the strictest of temperance doctrine, I am proud to be in the ranks of wine and brandy makers, and as a temperance man

And for our industry, as sure as the scasous come and go, as sure as the tides ebb and flow against the shores of our Golden State, and as solid and enduring as the grand old mountains that rear their hoary hends in eternal silence to the sky, so sure, so solid and so enduring will be the glorious future of the grape industry of California.

GOOD FOR DIPLHERIA.

The Medical Times says: Alcohol, we make bold to say, is the prince of antisepties and the most perfect and reliable medicine of which we have any knowledge in diphtheria. Diluted with equal parts of water, and given in small and repeated doses, the malignant symptoms of this most fatal malady soon disappear and convalescence becomes assured. It is interesting to note with what facility the alcohol dissolves the diphteretic exudation in the throat, lowers the temperature and calms the pulse, showing its destructive action upon the germs of the disease which have been absorbed by the glands and gained access to the blood. This remedy has been used by us in the treatment of diphtheria since 1873, during which time no case of the disease has slipped through our hands except in one solitary instance, and that case was in articulo mortis before the remedy was given. The remedy is also prophylactic to the disease, as we have found in many instances where it has been expedient to quarantine the patient. For this purpose it is only necessary for exposed persons to use the remedy, diluted as above stated, as a gargle, and to swallow a little of it three or four times a day.

CURING HYDROPHOBIA.

Hogyes, of Buda-Pesth, has published in the Ormsi Hetilep an account of some researches he has made on the protection of dogs from rabies by a somewhat simpler method than that employed by Pasteur. He too, makes use of the spinal cord of an infected rabbit, but instead of drying it to a gradually increasing extent to obtain varions degrees of activity, he merely rubs it up with water containing chloride of sodium so as to make solutions varying in strength from one-tenth to one-five-thousandth. The dog to be protected is injected successively with these, beginning with the weakest. The results appeared to be quite satisfactory, and a complete immunity from rabies was secured by six of those injections, -Lancet,

We call the attention of our readers, particularly vineyardists, to our rabbit Is it nothing to be so far up in the pro. Proof Netting advertisement of J. A. Ro fession as to be able to go to Washington in ing Sons Co., S California Street, S. F.

Wine Making Machinery.

(The following paper was read by J. H. Heald, of rockett, before the 8 xth Annual Convention of viticulturists, held under the auspices of the State ounnission.)

Before I say anything about wine making machinery let us see what kind of a cellar we have to put it into. As it often hap pens the builder never thinks of this subject. I have been often called to put machinery into cellars and found great difficulty in doing so to any kind of advantage, simply because they did not know what kind of machinery was to be used or how it was to be arranged. Now it is of great importance in building a wine cellar to thoroughly understand just what is required before you commence operations.

First, the location; second, the size of the building; third, the kind of cooperage fourth, the kind of machinery to be used

The location, if it is convenient to locate on, a side hill, so much the better as it is better in all respects than level ground.

I do not advise a winery to be built over one story high, as I do not like the idea of the fermenting room over the storage cellar, is it is much better to have the two rooms so that the storage room will not catch the drip from the fermenting room, and, also for the reason that a single story cellar car be built cheaper, the walls of a one story boilding can be very much thinner than it of brick or stone and if of wood; a very much ligher frame and just as useful for a cellar as if it costs two or three times as mnch.

When you can get a hillside for a location, excavate the width of the first building for the first story, and directly back of this excavate another place for the fermenting room. The floor of the last building to be one story higher than the first building. The back wall of the first building will be the front wall of the back building, each building to have a light roof which will be found to be much cheaper than an expensive floor, that would be required to hold up the immense weight of wine. In building in this way you have all the advantages of a two-story building without the disadvantages of dripping floors, carrying what you do not want into your storage cellar below. The wine runs by gravitation just as well as if the two floors of the buildings were directly overhead. I would advise parties who contemplate building a winery to use in the fermenting room, tanks, 10 feet diameter by 4 feet, 8 inches high. Make your building 54 feet wide in the clear so as to get in four rows of tanks. By using four rows of tanks you can make one chote fill all the tanks, there should be at least one foot fall to ten feet, and more if convenient. The chutes should be 8 inches wide and 16 inches high.

The crusher and steamer should be placed in the center of the building, I have reference to the width of the building-the center of the width of the building, the alleys should be 5 feet wide and the outside row of tanks should be 11; feet from the walk, the tanks should be about 11/2 feet above the floor of the ferm-uting 100m.

The press should be put in a stationary place, and if possible, set about three feet lower than the fermenting room floor, so as to be convenient to dump the pomace from cans into the baskets of the press without having to shovel the pomace, as this would be too expensive a way to handle it. The platform or track that leads to the leaching Proof Netting advertisement of J. A. Roebl- tank should be on the level with the press. It should be a pump without valves, as one ters with a friendly eye.

with valves is very apt to be clogged with the seeds and cause very annoying delays.

The building for the fermenting room should have walks about twelve feet high and a roof of one-third pitch, and a gable where the crosher and steamer is to be placed, so as to get the mschinery above the walls of the building, or in what might be called the second story. If my crusher and steamer is used, the crusher will stand nine feet high above the floor it stands on. I would advise all to use my elevator for elevating the grapes, as it is the greatest labor saving machine in use for that purpose. I advise the use of the loose grape elevator where it has not to be more than 48 feet long, but if longer than that then I would recommend the box elevator. The reason why the loose elevator should not be used when the length is over 48 feet is that when the elevator is very great it is apt to make a dirty mess of it for the grapes will roll back enough to break the tenderest kind of grapes. The elevator should set at an angle of thirty-five degrees or less, it can be set a little steeper than this, but it is not advisable. If more than one crosher and steam r is used they should be set at least 35 or 40 feet apart so that the teams will not interfere with each ther in hanling grapes to the elevator.

The leaching tanks should be placed out. side of the fermenting room and enough lower than the floor of the fermenting room that the pomace can be dampened from the cans. If this tank can be placed high enough to run or drain by gravitation to distillery so much the better. The distillery should be placed in front of the storage cellar and 100 feet from the cellar, on account of insurance rates. It should be located directly in front of where the crusher is situated. The engine and boiler will be in the distillery and for that reason it should be placed so as to use as little shafting as possible. A cable is a convenient way of transmitting the power from the eugive to the crasher. I would advise that the floor of the distillery should be placed about one foot below the floor of the surrounding buildings as in case of fire the spir.t would not run into other buildings and set them on fire. I have known of cellars being act on fire in this way, in one case at the loss of \$100,000. The distillery should be built of brick or stone and roofed with corrugated iron.

In building storage cellars if location will admit of it, place the floor high enough so you can roll caska into your wagons without skids. As to the size and width of of storage cellars all depends on the kind of cooperage you are to use, and should be decided upon before the building is erected. Avoid having too many windows. Be sure to have windows so the light will shine down through the alleys. In case you are in a hot locality and you wish to use irou for the roof, put the five inch corrugated or the coarsest kind in the market, placed on a tight boarded roof. By so doing you will find each corrugation in the iron will make an air doct to carry off the heat, making a much cooler roof than if irou were put on io the usual way.

DURING the past fortnight, a New York firm received 139 casks of Hungarian wines. This is one of the largest importations of these wines that have ever been made.

THERE is some talk in Bordeaux of orgauizing a school of viticulture in the Gironde, but it is not regarded in all quar-

Wine Cellars for the Interior Valleys.

(The following paper was read by Frank W-4t, of Stockton, lefter the Sixth A in all resorts in if Vitra prints held under the adoptes in the State Commission.)

In the erection of collars in the great interior valleys of California, many obstacles product the medica which are not apparent to those wine graw rs whose vine yields are ing the comparative ments of these lift context in the single reality of the size hillsiles.

We can not thinnel into the side of a mountain for a collar, a other have we any stone quarties near at hand hence, we must look to our only available building materials, brick, wood and adde. The cost of a collar built of brok is sufficient to place it beyond the reach of many wingrowers of limited m ans.

Cellars can be constructed of wood double-willed, which will, perhaps, keep a moderately low temperature, but the very fact that all wooden builtings are subject to a heavy fire risk, places them out of the question, except, perhaps, for fermenting houses, where very limbs valuable property is stored except during the vintage season

We now tirn to the ad the which seems to be really the only che as and serviceable material for the construction of storage cel lars in the Lot valleys of the interior. Their durability has been the roughly proven in the old Spatish Missions built of this material so long ago many of which are even now in very good repair. As a non-conductor of heat, they are unquesti nably betto r than brick and cellars can castly be constructed which will maintain a temperature not exceeding 662 to 652 even during our hatt st months. With the exception of our own cil ars at Stockt at, and those at the various vin-yards around Fresne, I have never seen any adobe cellars in the Stat , and a few facts concerntheir cost and construction will perhaps be of interest.

FOUNDATION.

It is policy in all cases to put a foundation of brick or concrete under an adobe building and if gravel or good hard pan is at hand to be used in making concrete that material to use. Broken rock or "clinkers" from brick-yards may be us d. Concrete is A few small experiments will soon demonstrate to any practical man. What propertions of coment mixed with gravel or other material, will make the best union? Wegenerally use one part cement to eight or nine parts of moderately cours, gravel.

The depth of the foundation must probably depend upon the location of the building, but we have found a foot of concrete twenty-two inches wide sufficient to sustain the walls if a collar fearteen for thigh and eighteen inches thick. The course to should come a little ab we the surface of the ground. to keep the moisture away from the bottom of the adobe wall.

In the manufacture of adoles, which are simply sun dried broks, the first step is to find a soil which, either by itself or mixed be hard and at the same time will not crack.

used in quite a large propertion. brick moulds, but larger in siz . The pr size Ladobes, flam not prepare lt express an opinion.

Adobes of the size first mentil is I can be labor. In this connection I would state that has a harder surface to adhere to. skill delibor is not in essary in Living idobes. It is plain rough work, and any relinary laboring man will soon born to Liv them as well as a mason. As a proof of this we have in Stockton a cellar built fifteen years ago with unskilled lab r, the walls of which are as sightly and as we'll work, it is perhaps better to use skilled has the appearance of brick. labor. I make the allusion to unskilled, construct small cellars for the least possible st, and are prepared to devote their entirwork.

Adobes may be laid in either mind or mertar, the latter being more expensive but a little tett r. To show the congressive est of brick and adobe, 1000 a lobes 3x6x12 an be made and laid for \$11 p r M. while bricks 2x4x5 cost with us \$15 per M. Au adob being three times the size of a brick. 1,000 adobes at \$11 will occupy the same space as 3,000 bri ks at \$15 per M or \$45. quarter as much as one of brick. It may will make even a letter showing.

The walls of a collar having been constructed, the next move is to lay the ceiling. The size of the floor poists will depend upon the width of the span between supports

We use 2x12 timb is 24 inch s apart for is by all means the cheaper and better 20 feet spans. The floor should be of redwood and should be covered with a lay roof adobes and mud five or six inches thick cheaper for the reason that it can be laid This serves to keep an even temp rature, quicker and no skilled labor is required and another great advantage is derived from the fact that there is absolutely no connection between the roof and the wood work in the cellar. The building is rendered thereby as nearly fire proof as pessible. In fact, experienced firemen have appressed the opinion that the roof of a inpury to the interior of the cellar, We The roof of the collar may be of tim, corrushould proport through four feet. Unless the walls of any adds hulling are projected. vious to Wat T.

Compat is the material generally use i impossible to prevent its cracking, for the Great care should be taken not to use soft with a brish is far letter, and is certainly litest attempt, who has not yet proceeded afacture of intro-from the fact proceeding adobtes. I have seen walls built of adobtes cheaper. One barrel of coment is sufficient that one ight to rightly pudged, should and take a current as an item which sediment from the rivers had been for 1,200 square feet of wall.

The At the winery of Webster & Sargent at is briefly this A Boston company is form t slightest moisture would cause these walls. Minturn, Fresho county, a mixture of care, with a capital (\$200,000), who havil be into crumble, and it was almost impossible to tar, salt and potish was used, and I am ore is lit \$1000,000 if the result of the protect them from the rain. The regular convinctiss more serviceable than coment. firstly at sexperiment is satisfactory. Tourmoulds for making adobes are all-fashioned. The properties used were five gallons of angathe year they will send through a rest through the ross sizer to one pound of potish, and five in addition to the in a ready owned by cess of manufacture is the same. We have periods if sa't less by limb twiter. This them at First Sout, Kansas. One of the always used addes 32/42 metes, while in anxion should be relation uple bean three fact ries were beloated at Fipska. From the size is generally 48/40. Regards or limity what swish brush doing used in Kansas but the signature of the others has

lyings should be used. This of coars gives the lengthings as surbre appearance. made by contract for \$4.50 t. ~5 p.r. M. and which many w. a'd. Object t. lat. c. ment had in the wall for \$0 per M by skilled can now be appeal better than before is a

Mony with cell are in Freene are comented. and blocked in unitation of stone, and the finish is certainly very handsome. The work is, how-ver, quite expensive. The app arance of un adda building canbe improved by putting on a brick front, laying a course of brick in the front of constructed as any we have since had built the adobe wall, laying it at the same by masons. However, if one is not prefitime. Any design may be selected, and the pared to give his personal attention to the adobes being onnected the whole building

W. have adopted this plan in our builtlabor for the benefit of these whee wish to ings, rected in the past two years. In conclusion there seems to be no rusen why adde-callars should not be more generally time and attention to the details of the as I in this State. They are much cheaper, the burning by, such pois nous chemical than brick, cost only a little more than products as are commonly employed in the wood, and on the whole seem porticularly idopted to our wants.

ANOTHER TRIAL FOR SORGHEM

At bird int rods, says the A + of for the last ten or fifteen years, glowing prospects have been hell out to such I alers in sugar as would consent to abstract the beaten track and enter up in the manuface, necessary to take time mixed with as small Hence an adobe wall costs his about one-ture of a rightin sugar. As long ago as be that all bis of the size used in Fresno 1877. Fr. Collyer, who was at that time Chemist of the Agricultural Department at Washington, had this to say in the subject. "If they will give me ten acres of ground to experiment on a xt season, I will return twenty acres of raw sorghum sugar fully equal to the best raw cane sugar or forfest in abundance, and, as an emetic, mustard, my reputation. The corn crop of I linuis is worth about \$75,000,000 if they will devite one-tenth if the screage to singhum if the best variity, they can raise sugar cates, and the alkaline hydros alphates, use equal in value to the whole amount now vineger and afterword offer milk. imported, which is about \$109,000,000," Professor Collyer also r ports the success examdes of potassium and in reary, the he had met with in extracting sugar from sulphocyanides, oil of letter almonds, or or lineary white field corn, which was re- introbenzing, pour water on the patient & markable enough to entitle it to a place in head or spinal column, and put mustard my sugar discussion. From an acre of plasters in the sole of the first and the and plant I with a rn known is the horses stomach. Do not let the patient go to building so constructed could burn without, to the variety, he gather I the cars while sleep. fully rape, and their yield fishelf from 5. For ether, petroleum, ben be, fruit have had reference to buildings of one story, was sarty-mine and one-tenth bushels, it seemes, and compentrated alone, take ver double the average y. I per acre of sizing mustard as an emetic, with much gated from shingles or shades. The latter the whole scattry for that year. Thin warm water, cold baths, and fresh air, would be the cheapest material. Be fs from the stalks heaving to 1 not pencils f. Koop the patient awake. raw sugar, and I fits methingly to boused on Forthering unds of larging road, as to ther. The idea of procuring sugar use mustard as emotic, with worm water, from the rain by sheds, they must be from from a ris stalks is not a new one and did. Epsem salts or Gamber's saits in water. test Hy some scaling which will be imported to rightate with Professor Conyer. It is 7. For arsent, and its compounds, use said to have been long practical an some emustard, and drawzed from with magnesia. parts of Movies, and in a letter to J his and afterward oil, mark or man aginous with sand, will make an addbe which will but the objection is raised that it is also st Alicins from his will, divide a promise it, inquids, 1777, shi gar sama count of its bank in This can easily be accomplished by mixing reason that coment will not adhere as well on Massachusetts bring the R vocationary aims or time water, and afterward easter a small lot of mud, leting it soak over night to addle, as to brick. A thick conting is war Sofir, however, no divine firex and moulding a few adobes the next day, usually applied, but from experiments we tracting chap and god raw sigar, either One day's exposure to the san will prove, have recently trid, we are convined that from corn stakes execution, have not with this act in water, and most orless an whether or not they are going to crack. Dain consist mixed with water and applied agreements is facility, we are, included the transfer of the many

not been with it. Kansas towns are experty completing for the serverks, one towarding so far as to off r not emp the land, but a tionus of \$10000 The pirent company will own a controlling share of the stock of such leal o mpany. It is unfortunate that on of the first dates of the company will be to fight the tieverneent on their patents, the Government claiming that Professor Swenson, the patentee, made his discoveries while under Government simpley. The company claim, on the other hand, to have plenty of proof that he made his discoveries before ent-ring the employ of the G vernn.-ht.

ANTIDOTES FOR POISONOUS CHEMICALS.

Many serious accidents, says the Motile bar dis Pro Inits Citimiques, happen in consequence of a less of time in the application of r medies in the case or also retion industries. The following antidotes are recommendel.

1. For phenic, su'phurie, muriatic, nutrie : nutro-munatic acids, creosote, uniture of redine, or phosphurus, use the white of an egg well beaten up in water, and a teaspoonful of mustard in wirm water. In case sulphum, "mittie," or murianc acid has been swall wed, if 19 a quantity of water as possible.

2. For chromic acid, the chromites, and colors that have chromium for a base, the compounds of copper, and such preparations as have autimony for a base, such as tartar emetic. and the compounds of mercury and zine, use the whites of eggs which, however, is useless if the poisoning has been done by tartar emetic.

3. For ammonia, soda, pot issa, the st'i-

4. For prassic acid and its salts, the

S. Froxahe and and its saits, us-

For intrate of shiver, us her bets sailt

WINES.

Examination for Adulteration of the Wines, analyzed by the United States Department of Agriculture

In the absence of any well-refined national standard as to what shall constitute a pure wine in the United States, or definitions and limitations as to the nature of the liquids which can lawfully be sold as such, I have had recourse to the well-deand earefully worded laws of Germany and France which deal with the adulteration of wines, some of which, together with the accepted methods for the detection of adulteration as agreed upon by chemists of prominence in those countries. I have collected together and inserted at the close of the Bulletin, under the heading of Appen-

The only state law 1 have been able to find which deals specifically with wine is a recent enactment in New York, which is also given in full in Appendix C.

The nature and extent of the different kinds of adulteration as shown by the samples examined may conveniently be taken up in the same order as was pursued in treating of the methods for detecting them, and of these the first is the dilution or watering of wine.

THE DILUTION OR WATERING OF WINE,

It would seem natural that in American wines, which can be produced so cheaply and in such great abundance, this adulteration which is such a favorite one with the manufacturers of the costly wines of Bordeaux, Burgandy, etc., would be very rare. The fraud is so simple, however, so easy of execution, and so difficult of detection, that it will probably always be a favorite one with unscrapalous dealers. It must be ramembered, also, that with many American producers, whatever article they produce, more attention is paid to its quantity. Wine growers are not the only persons that practice this method, as it can be done also by merchants and retailers, although in the latter case it is much more easy of detection. That which might be called scientific dilution, by means of the processes already described (petiotization, etc.) is much more difficult of detection than The simple attenuation of the wine by the retailer. So little official supervision has been exercised over the wines sold in this country, that certainly the fear of detection has not operated very largely as a preventative of this, or in fact any other adultera-

In Dr. Baumer's work, which has already been alluded to, and to which I shall have occasion to refer frequently as constituting, small as it is, the only published investigalion of American wines for adulteration. none of the samples fell below the German standard in percentage of extract (1, 5. grams per 100cc.). On the other hand, nearly all the white wines which I submitted to a complete analysis, fell below this standard, and two of the red wines, -A large number of the samples analyzed by Mr. Parsons also fell below it. That this limit is not placed at too high a figure, for Califorcia wines at least, seems evident from a study of the table I have prepared of Professor Hilgard's analyses of pure wines, from which it appears that only one series of analyses gave a minimum below it. while the averages are far above. It might possibly be too low for Virginia wines, but the majority of those that fell below it were of California origin. The New York law specifies "that such pure wines shall contain at least 75 per centum of pure grape ples salicylic acid and sulphites were da- flame. Baumert obtained the same test in essences,

or other undried fruit juice," Just how a chemist, in the absence of legal definitions of what shall constitute "a pure grape or other undried fruit juice," is to decide upon the ouestion of such adulteration by the above law is difficult to indicate.

PLASTERING.

American wines would seem to be quite free from this form of adulteration. Baumert found no undue excess of sulphates in the samples be examined, but refers to a sample analyzed by Stutzer, which contained in 109cc, 141 gram 803. In my seventy samples 1 found none which exceed d the generally adopted standard of $692~\mathrm{grams}~803$ to $100\mathrm{cc}$, or $2~\mathrm{grams}~\mathrm{K}2804$ to the liter, and only three, Nos. 4100, 5107, and 5115, which contained SO3 , corresponding to over 1 gram K2SO1 per liter.

FORTIFICATION.

It is evident that the German standard of 100 parts of alcohol by weight to 7, of glycerine, which is relied upon as a means of detecting the addition of alcohol, cannot be applied to American win s. Only three of the samples would pass muster by it. and it seems hardly possible that the practice of adding alcohol could be so wide spread as would be thus indicated.

Below is given the number of grams of glycerine for 100 grams of alcohol obtained in the samples (exclusive of the sweet

	4995	7. 1	5104 3_5
	1.49906	5 43	4997 3. 7
	5005	9, 0	4998 4. 7
	5005 5084	6. 7	599s 7. 3
	5088	4.5	5000 9.3 5081 3.7
	5091	5.7 .	5081 3. 7
	5095	3.4	5083 4.3
	5098	4. 3	5097 6. 5
į	5100	3. 1	6098 3. 4
	5101	6.3	
	5103	.3. 9	

Average..... 5, 1 Baumert obtained very similar results; out of thirteen analyses (including sweet wines) made or collected by him only four contained a larger proportion of glycerine to alcohol than 7 to 100. Unfortunately no determinations of glycerine were made in the pure wines analyzed by Hilgard; so no light is thrown on this point by them. The only possible way of deciding it, together with other questions relating to the composition of American wines, would be by the analyses of a large number of wines known to be pure. In the absence of such evidence, it would be useless to attempt to pass judgement on the above samples as to whether they had been fortified with alcohol or not.

The New York law allows of an addition to wine of "pure distilled spirits to preserve it" not to exceed 8 per cent, of its volume. which, supposing the wine to contain originally 10 per cent, by volume, would give a wine containing at least 17 per cent, by volume, or about the highest amount of alcohol which could be formed in a fermented liquor.

The sweet wines are, of course, well known to be fortified; they will be treated of more fully further on.

PRESERVATIVES,

Especial attention has been given in the present investigation to the use of improper preserving agents in fermented drinks. It was thought that such agents were much used; so a considerable number of samples were purchased, and the examinations for preservatives, as well as for other adulterations whose detection did not require a complete analysis of the wine, was extended to all. The results show the practice to be more extensive than was supposed.

The following table shows in what sam-

tected. In the case of the sulphites, where every one of the samples he examine !. He a "trace" is indicated, there was not sufficient to justify the assertion that a sul- plants have been known to assimilate bordirectly to the wine; in such cases it probably came from insufficient chansing of the tains considerable quantities of borax, he casks. Where it is indicated as "present," however, there was sufficient indication of its having been added to the wine,

EXAMINATION OF WINES FOR PRESERVATION

Made Salicylic

1	Designation	in	acid.	Su phites.
-	Champagne	N Y	None	None.
		Obio		
- 1				.Present.
ď	Burgandy		!!	None.
	Catawha	N. Y	Present	**
'	Sweet Scuppernong	N. C	. None	
,	Charbono	['al	;;	
-	St Macaire			
	Angelica		"	
	Claret			None.
	Moselle		"	Present.
ŀ	Riesling Gray		Present	None, Present
(Santerne		None	
s	Sherry		Present	None.
,	Sweet Burgundy		None.	
	Tokay	11	"	**
	Zinfandel	"	;;	Trans
1	Californ'a Hock		"	. Cresent.
	California Biesling		!!	. Trace.
	Zipfandel			None.
	St. Ju ien Claret			Trace.
Ē	Sweet Catawba	N. Y	Present	None. Trace
i	Riesling		None	. Present
1	Sherry	Cal	!!	None.
t	Muscatel	**	"	"
-	Angelica		Present	
	Z nfandel	Cal	. None	
- [Claret	Va		Trace.
3	California Rerver	. Cal	:: ii ::	Present.
3	Claret	Va		
:	44	N. J	Present	"
	Catawha		Present	
1	Claret	Cal	None	"
	**	Va		
	auterne			Present.
;	Catifornia Becune		Present	None.
:	Sweet Cafawba		. "	.Trace.
:	California Gutedel		None	. Present.
1	California Zinfandel			Trace,
.]	California Port		Danson t	None.
.	California Angelica		. Present	
	Frentignan	Cal.	None	
1	California Zinfandel		Present	Trace.
٠	Gutedel Hock	. Cal	None	
١	California Burgandy	·: :: ···	Fresent	Trace.
٠	California Madeira			None.
.	California Port		None	. "
,	California Frontignan		. None .	
	California Angelica	**		Dungan t
1	Burgundy Vinginia Seedings Vinginia Seedings Vinginia Seedings Vatawba Sweet Scuppernong Chomo Sweet Scuppernong Chomo Seedinginia Si Macaire Angelica Burgundy Valare Moselle Riesling Johannisburg Santerne Sherry Sweet Muscatel Tokav Zunfandel Catawba California Biesling "urgundy Zunfandel St. Julien Claret Sweet Catawba St. Julien Claret Riesling Wirgundy Zinfandel Catawba California Biesling "urgundy Zinfandel St. Julien Claret Sweet Catawba Riesling Sherry Port Angelica Claret Claret Claret Angelica Claret Claret Claret California Berger Claret Sweet Catawba Claret Claret California Gutedel California Gutedel California Gutedel California Biesling Claret California Biesling Claret California Berger Claret California Biesling Claret California Biesling California Biesling Claret California Biesling Claret California Fortignan California Fortignan California Burgundy California Berger Hock California Frontignan California Berger Hock From an examinat	"		.rresent.
1	From an examinat	ion of	this tal	ble it will

From an examination of this table it wil be seen that of seventy samples examined, eighteen, or over one-fourth, had received an addition of salicylic acid, and thirteen had been preserved by the use of sulphurous acid, either as such, or in the shape of a sulphite. In to cases both agents had been used. One of the samples which contained salicylic and also one containing sulphites were among the samples exhibited at the meeting of the National Viticultural Convention last year in Washington,

The question of the propriety of the use of preservatives has been very fully discussed in previous pages, and will not be further enlarged upon here.

Baumert found no salicylic acid in the samples examined by him, and only traces of sulphurous acid.

The examination of the samples for boracic acid gave such peculiar results that I hesitate about pronouncing positively npon them until I shall have had opportunity to investigate the matter more closely. The test with tumeric paper gave slight traces present in all but two of the thirty-six samples which were submitted to a complete analysis. With only a very few, however, could any test be obtained with the alcohol

seeks to account for this by the fact that phite or sulphurous acid had been added acie acid from the soil, and knowing that in some parts of California the soil conoffers it as an explanation that it was taken no by the vine from the soil. This explanation seems hardly temble, and in view of the fact that some of the samples I examined came from various parts of the country other than California, must be thrown aside as insufficient. It is a singular fact that both of the samples in which I failed to get the test, Nos. 5087 and 5102, were Catawba wines.

I can offer no explanation of the matter except the suspicion, which I hope to be able to investigate, that the trouble lies with the test.

ARTIFICIAL WINES.

No test for free tartaric soid was obtained with any of the samples, which would seem to indicate that none of the wines were artificial wines, in the make up of which tree tartarie seid is very apt to figure.

COLORING MATTERS.

All of the samples of red wines, about forty, were submitted to a search for aniline coloring matters, which resulted in the demonstration that one sample out of forty -No. 4996-was colored with an analine dye-stuff, probably fuchsine.

Banmert found one of his eight samples to be colored artificially with an analina dve.

No search was made for foreign vegetable coloring matters.

SWEET WINES.

It would seem advisable to call attention to the very variable character of these wines, as shown by the analyses. Considering the extensive use that is made of such wines for medicinal purposes, it is greatly to be desired that some standard should be required for their composition, or that their relative content of alcohol and sugar, st least, should be stated on the label, as is required by the Bayarian authorities.

Among Mr. Parson's samples will be found a "Sweet Muscatel," which contains as high as 31 per cent. of sugar, and a "California Port," which contains nearly 21 per cent, of alcohol by weight. The analyses of the sweet wines made by myself furnish a still poorer showing, for the low figures obtained for glycerine show that very little pure grape juice enters into their composition. Take the different samples of Angelica and Muscatel wines, for instance. These varieties are almost peculiar to California; they are made from a very sweet grape, of strong flavor. Comparatively few analyses have been made of them, but Banmert had among his samples two Muscatel wines and one Angelica. These contained the following percentages of glycerine: Muscat (H), .883; Muscat (W), 1.424; Angelica, .698,

Compare these numbers with the percentage of glycerine contained in the following: 5003. Muscatel, .102; 5092, Muscatel, .103; 4994, Angelica, .140; 5093, Angelica, .052.

These results are so disproportionately low as to give strong ground to the suspicion that but very little of the pure mice of these strong-flavored grapes entered into the composition of the samples I examined, but that they were chiefly composed of alcohol, sugar and water. It would be an easy matter to imitate the strongly-marked flavor of the grapes by means of artificial

California wine growers claim that they have in their very pure grape brandy an excellent and unobjectionable source of alcohol for the fortification of sweet wines. but certainly the samples above partike more of the nature of a liqueur than of a natural wine.

The followine table gives a classification of the wines analyzed in the Paris Manicipal Laboratory, during the years 1881 and 1881, showing the proportion which was declared adulterated, and the relative amount of the diff rent varieties of adult ration as shown by the samples analyzed. It must be remembered that these analyses were made on suspected samples, and do not by any means represent an average of the quality of the wines sold in Paris,

Number of samples analyzed	. 3,361	5,1%
Good.	357	~!!~
Pavable,	. 1,003	1,590
Diseases of wine (and, bitter,		
and is, etc.)per of	ent. 6.51	5.24
Fortified	9.5	7.32
Wines not plastered, or plas-		
tered less than 1 grain "	21.15	25.47
Wines plast-red between 1		
and 2 grains	52.53	41.49c
Wines pladered above 2 grs "	보다면	33 01
Watered	41.12	29.15
sugared and petiotized "	13 3 4	6.62
Art finally colored	15.65	7 666
Salievlated	1.73	5.00
Saltel "	0.15	(11)
treplastered		11.11
	100	

1551 1552

A wine may be counted several times in this table. For instance, if it is at the same time watered, fortified too much, plastered and artificially colored. The total of the percentages, therefore, adds up to over 10d.

The samples analyzed by me may be tabulated as follows:

Total number analyzed		
Plastered between 1 and 2 grand	- est	1.335
Watered (according to European stan-		
dands)	* *	12.85
Artificially colored,		1.43
Sancing the second seco		25.71
Sulphered	17	15.57

The percentages are of the total number analyzed, not of the number adulterated, as in the French wines.

A PRIZE COMPETITION.

A prize is to be awarded in IS90 in Znrich. Switzland, for the following researches in natural history; "New investigations are desired regarding the relation which the formation of the bones bears to the statics and mechanics of the vertebrate skell ton. The results of the investigations as a whole are to be demonstrated in detail. by way of example on the skeleton of a definite species." The conditions are as follows: Competitors for the prize must send in their work in German, French, or English,, by September 30, 1890. The award will be made by a committee consisting of the following gentlemen: Professor Hermon von Meyer, Zarich; Profess r L: Rutimeyer, Basle: Professor H. Strasser. Berne: Professor Otto Mohr. Dresden, and Professor Albert Heim, of Zurich, representing the committee offering the prize. The judges are authorized to forward a prize of 3,000 francs; and a further sum of 1,000 francs is placed at their disposal for distribution in minor prizes according to their discretion. The work award d the first prize becomes the property of the Foundatien of Schuyder of Wartensee, which will arrange with author regarding the publication of the same. Each competing work must bear on the title page a distinguishing motto, and must be accompanied by a scaled envelope containing the name of the author, and bearing on the outside the same motto. Competing works are to be sent in by the date named, to the following address An das Prasidium des Convents der Stadtibibliothek in Zurich (betreffend Preisanfgabe der Stifting von Schnyder von Wartensee für 1890.

RAISIN GROWING

the following estimate of the cost of custi- Your assistants you will fill mostly amavating, enring and boxing for market one tiurs, acre of mature raisin grapes. I have a repugnance of giving away a business in d tail that I am engaged in, and do not intend to give you all the particulars, but; seeing so many Munchausen amounts in the papers of extravagant profits in fruit culture that I feel like telling those who are amateurs and think of engaging in the fruit business some thing like the truth about it, and will assure them without the fear of successful contradictions that if they start with the idea that they can pay they expenses of a raisin vineyard in full bearing, say one ton of rusins per acre with \$10. or plant a fig orchard and the fourth year gather a ton of dried figs per acre, and uough green to pay expenses, they will be decidedly disappointed. That such feats can be accomplished we have the assurance of the Y do papers. That this superior atravagance was accomplished in Yolo ounty, with the editor's comments the those who would not be satisfied with that would want the earth and a barb wire fence from lit. My estimate of expense is with white labor and that a day's work, wages and board per day \$1.50 will give the expense of cultivating in detail and the picking and curing the grapes into raisins, the estimate to be one ton of raisins per acre. ne-half sun dried the other half cured in drier

Expense of cultivating raisin grapes one, ton raisins ner acre

ton raisin per nere:
To shoreling around sines and pruning \$ 8 25
To burning orush and irrigating 2.50
To twice plewing 4 00
To twice cultivating and twice harrowing 200
To shoveling around vines after plowing 1.00
For sulphur, and labor putting it on the vines 1.00
Picking, curing and putting in sweat-box one-
half ton sun dried 10.00
Picking, curing and putting in sweat box one-
half ton drier cured
Packi g 100 boxes, half loose, half Louion
lavers
Cost of 100 boxes, chromos and papers, 12 00

You will perceive this charges only labor and expense account—nothing for interest on investment, which should be reckoned at \$200 per acre value, interest, \$16. It is native Haugarian, one of the greatest win the writer's opinion the fruit business does not need booming. There is more fruit planted than there can be a profitable use made of. To illustrate the effects of booming where they made the boom work, I will retical experience as a wing row r. copy from the last Revul Press part of an interview with Professor Budd. He says "In connection with an old resident, we made a careful estimate of the loss s the past season around a noted fruit town in the south part of the State. The land for miles around the town has been planted in a mux-d way by amat-urs, in plots ranging from two to fifteen and twenty acres. We found that the crops of over 200 acres of wears befor being put into but's. peach s, 15 t acres of apricots, over 50 neres scores of acres in the aggregate of apples. pears, plums, cherries, quinces, olives and almouds, but been permitted to go utterly show that fruit planted in a haphazard way pertions of a character start and a character by amateurs disappoint many. "Amatem?" cases the sparker of the wine we be to by aniateurs disappoint many. "Aniat in?" cases the sparse of the wine we compared in the first culture with the present stage, and he thinking of sparkle and the west of the tray of the commencing wants to learn the full defined are chosen for the results as tion, and see if he is one. Hyon find you body, such arm tractives place where you think you would like to understool by the close alopted by Millive, look up those who are evidently Harasethy for 188 - 884 and 1885.

making in my casing fruit, then if you the blend for 1884 was made in four his it and think you can note it pay, buy tanks of 42,000 gallons each, comprising, Mr. B. F. Jackson in the Yolo $M(\eta)$ (sives) your land and git ρ it like first as you can.

CALIFORNIA WINES

What an Enterprising Californian 1 irm tanks of 12 000 galous each, viz. has done for the Champagne Frade

The Across at as times whitness a lively interest in the worth of our California Industries, in recesporally towards that of the manufactir of activ wines. In a recent issue and r to all or h adia, while criticizing with its whitel so rity the ections of some anser appropriation and factoriers it pays the till saing will merited compliment to the ent ryme, and fair de ding of one of our backing beat firms, which it is a pleasure to right and in these columns.

It is indole a juty that the champagne trade of the Uniformic product should be so badly handle quell by the field ness of Madame I ishi nomono sale, and, what is infinitely werse, the villainy of unscrapa-Dus manufacturers on the other. Ther are bogus champagnes as well as bogus pianes. In San Unancisco, for instance, are several concerns who pretail to manufacture champagne by pumping gas, generated from vitrod and marble dast, into inferior still wines, and palming the poison di to the unsuspecting many as natural made California sparking wine. And the reputation, so nolly fought for and won wherever the pair. California champagne has found in intro-, is being sorely undermined by these false prot nos.

When Ane means I are to be how st with themselves by acknowledging true merit in their own products, California champagn. will occupy a very prominent position,

Probably the largest concern on the Paerfic Coast who have constantly made only pure wines and have had to fight the most unserupulous comp tition, is that of Arpad Haraszthy & Co., of San Francisco Mr. Haraszthy is Presid at of the State Board of Viticulture and owner of the largest champagne establishment in California. A growing countries in the world, with the experience obtained by a long residence in the champagne district of France, he has probably had the last procueal and these

California champagn dates back to 1862 when the first successful experiments wer made. As our readers well know from nu morous articles we have published from time to time, champagne is produced by a blending of lift rist wines, for no one wine will sparkle by itself. By as ending to a loft w find blank layings in easkwhich are being k pt for from in it its is called the cuy co and means a mass of of prunes, 200 acres of grapes, and many wines formed by saiving the lift raid vie rictes of graps, which by their diffring natural contraster, in a row in the majest , ach other is such a state of combinate to waste." This article would be too long establish 1 by the sport of the hill 2 should I attempt to bring more proofs to It is not sortly be a from the event proare, own up, be contious; don't get on an strength and bought. It years I all. exertsion train to a strange town and buy in a var ho line 12 000 gal ons of ware a piece of land at anction. Find some The intricacy of the half is perhaps but Fr him, van var but property. Conforma

		Gallons
Viste 1 for	1- (1542)	6,000
or and the second		2.100
other more a	1 ~~ 1	1,0490
Carry as 1.1	16.74 L	1,1800
ir _e r		1,1883

The blend for 1884 was made in five

		Gallons.
With Zaranii I f	1 44.2	1,000
W. ite Zinfan fel of	1 == 3	2,000
F: r. r (1)		1,000
Official Boxes		2,400
Olsestanit land		2,300
t ter starin		300

The fluid of 1985 was made in six tanks of 12 000 gallons each, viz.:

	Gallons.
White Zintan C. J. 1 1883	
White turger of 1884	2,000
White the mater of 1885	1,600
White Male is end 1881	1,100
White Virilla 1 1884	500
tira Rossing (1981)	500
Meaning (1983)	 500
Frank o Rosting of 1881	400
Folly Blanche	1041

Which tables not only show a gratifying mere co in the volume of the firm's trade, but the greater perfection obtained annual-

The making of champague is nothing lew. We will not describe it again, but only say that this firm uses only new and the most expensive corks coming into this market.

The three leading brands of California champagnes are "Extra Dry Eclipse," "Grand Prize" and "Salery Mousseaux." All these brands are exported largely to Moxico, China, Japan, Sandwich Islands, England, South and Central America, and will supersede the French brands in this country as soon as the wealthy Americans coast to purchase oil puntings by the yard and grage the quality of champagne by the athusiasm of the price.

With this brief sk tch before us, a word r two regarding the great house of Arpad Haraszthy & Co, appears aprepos. The firm is now composed of H nry Epstein end Arpad Horaszthy and was originally stablished in 1804. It is the only house in the State which was ever able in all these years to turn upon the market continuously first-class champagnes, produced only by the natural process, that of fermentation, in the bottle. In the pr paration of their champagnes no grain spirit or cognac spirit of any kind is used. Mr. Huraszthy's amition being to make wine that is absolutely pure. That he has succeeded is shown by the rapid increase in the sale of his hampagn s, which aggr gated 2,000 cases in Issu a count 14,000 cases in Issu of which 3,000 cases were sold by the New York agency. The charcest still wines of California bear their brand, and their imin use collars are filled with all kinds of California wines, hecks, Burgun lies, plarits, branches, etc., with a total expacity of 5 0,000 gallons. They own the Orleans Her Vineyard in Y do County, Planted in 1850 and comprising 700 mores planted with her acres of the finest graps, compassing all the Medic varieties and many ear, the Berginsty, Champagns and Rhine istrats, numbering some 45 varieties. are used to test the sail, commate and the angled dry of these van tos thereto. In a later after we said speak of some I the ather kinds of wine made by this tribuje grissive American firm,

RELESENTATIVES for the work known . 1 K hb r 3 house of Harastily A.C. Win s and B. in his Than he meanwassing lete 12 to trail

PRESERVATION OF WINES.

On the preparation of Wine for Preservation, F. E. Engelhardt, I'h. D. writing in the Analyst says:

During the time which clapses from the pressing of the grapes till the wine is put into the market for consumption, it has to be kept with the greatest care. Neglects in treatment and preservation during this period produce some changes which may become very serious if not at once attended to. It is not my object to enumerate all these changes. I will only speak of one change in particular and give the remedies usually employed and recommended against these changes.

The souring of the wine is the most dangerous one of these and is due to a great access of air to the wine. It is preceded by the appearance of mould (mycoderma vini). When the souring of the wiae just begins it is drawn into a clean cask, previously sulphurized and then cleared with the white of eggs. Since new oaken casks contain tannin we might think that they would assist in separating the foreign matter from the grape juice, But they cannot be used directly, because the peculiar smell and the extractive matter of the wood would go over into the wine; hence new casks are first washed out with a diluted bot solution of salt water, then well soaked and rinsed with pure water. Now, a quart of alcohol is poured into the casks, thoroughly shaken with it, so that the alcohol comes in contact with every part of the barrel inside, and then the alcohol is set on fire and while burning the young wine is poured into them.

The sulphurizing of the wine casks consists in hurning in the casks narrow strips of cotton or linea cloth saturated with sulphur. The sulphur while burning produces sulphurous acid, which not only fills the cask, but also penetrates into the pores of the wood. The antiseptic properties of sulphurous acid are so well known that I need add nothing further.

If the avidification is a little more advanced finely powdered charcoal is mixed with the wine and the latter after some time drawn off into another cask and clarified.

The addition of small quantities of finely powdered quick lime or carbonate of potash to the wine are used for the same purpose Rhine wines that become sour are usually cleared with a mixture of honey and skimmed milk. The addition of grape or cane sugar, together with some yeast to induce a new fermentation in the wine, is also recommended; but the only certain remedy against this difficulty, when it first commences, is the heating of the wine to about 145° Fahr according to the method of Pastenr, thereby killing the vinegar ferment-mycoderma aceti. If the change is too far advanced the wine must be made into vinegar.

The following list gives most of the remedies recommended; Still must, grape snear, cane snear, wine yeast, honey, boiled grape juice, juice of Spanish raisins, tannin, cream of tartar, tartaric acid, carbonate of potash, charcoal, quick lime, carbonate of lime, lime water, hi-sulphite of lime, salicylic acid, alcohol, brandy, skim milk,

When the wine, during the process of ripening, does not become perfectly clear, the last remnants of the suspended matter are removed by artificial means: White of island moss, gelatine, native alumina sense of the word."

Tierra del vino in Spain-Kaolin in Ger. many), blood, milk, filtration with the exclusion of air, charcoal, etc., are the means usually employed. Mr. Dyer patented, in 1835, in England, a clarifying powder, which was composed of dried blood, dried white of eggs, dried bones of young animals. When used, this powder is stirred with water, left standing for eight hours, and then mixed with the wine.

I stated above that for the production of wine possessing the finest qualities, the grapes must obtain their highest degree of ripeness, which, of course, can only happen in the most favorable years in the greater part of the wine producing countries. In ordinary or poor wine years only a very inferior wine can be produced. To remedy this difficulty the celebrated French chemist (and Minister of Finance) Chaptal. recommended in his essay, "The Art of Making Wine"-" In case the grapes have not obtained their maturity add to them until the must has attained the sweetness of the perfectly ripe grape."

The so-called chaptalizing of the grape juice consists in removing from the latter the excess of acid by the addition of marble dust or wood ashes and then adding to it the required amount of sugar. Sixty parts of free acid to the juice are neutralized to fifty parts of marble dust. The quantity of sugar to be added depends partly on the quantity of sugar present in the juice and partly on the amount of alcohol required in the wine; hence if the grape juice has but 12 per cent, of sugar and a wine shall he produced having nearly 10 per cent. of alcohol, 8 pounds of sugar must be added to every 100 pounds of grape juice.

This method is especially in use for the production of Burgundy wine. It is well adapted for "bouquet wines," since their peculiar characteristics are thereby not weakened.

Fortifying wines consists in the addition of brandy, Cologne spirits, or French spirit to the wines to increase their alcoholic strength and to stop further fermentation. This method is especially practiced in the southern part of Europe, Portugal, Spain, France, Italy and Greece.

Dr. Gale's method consists in the preparation of a so-called normal must, with 0.5 to 0.5 per cent. of free acid and 22 to 24 per cent. of sugar. Hence, if a must contains from I to 1.2 per cent, of acid it is mixed with an equal quantity of water, and if the sugar is equal to 20 per cent, in the grape juice we must add 14 parts of sugar to every 100 parts of grape juice. This method is especially employed in Germany in bad wine years and for naripe grapes.

The method of Petiot of improving wine, and especially of increasing its quantity from 100 to 500 per cent, dates back to 1852. In this year Petiot produced from a certain quantity of grapes instead of 7,200 quarts no less than 34,200 quarts.

First, he added to the expressed juice an equal volume of sugar water containing the same amount of sugar as the expressed inice.

Secondly, to the remaining grape pulp he added a new quantity of sugar water with 18 per cent. of sugar, and fermented it for three days. This latter experiment he repeated three times in succession with the same grape pulp, and sugar solutions of the same strength, namely, from 22 to 23 per cent. of sugar, obtaining this after fereggs, animal jelly, isinglass, gum-arabic. mentation, as he says, "Wine in the full

The infusion wines (trester wine) resemble, according to Thudichum and Dupié, " natural wines in all essential quali ties; they contain all the essential ingreas the natural product."

The value of Petiot's method to the wine producer, especially in unfavorable seasons, cannot be over estimated, since the wine made after this method is ready for bottling in four months, instead of three to five years, as with the natural wines." They are not subject to disease like the natural wine, and possess a most remarkable stability, hence require little or uo care and almost no fining. These artificial wines are aromatic retaining the perfect bouquet of the natural ones. In case the grapes contain an insufficient amount of acid for the several infusions. and tannin for red wines; also mallow flowers or whortleberries to the pulp before heighten the color.

large quantities in all countries where the law does not prohibit their production.

Schule's method, introduced in 1865, and said to be practiced especially by wine dealers in England, Germany and Austria, consists in the addition of from 1 to 3 per cent. of glycerine to the wine, whereby the wine, if young, appears older and has more body and stability.

To what extent these various so-called wine improving methods just enumerated are practiced to-day on European wines designed for exportation to this country I am not prepared to state.

Very heavy fines, together with confiscation of the goods and imprisonment, for wine adulteration, have been imposed on the offenders for the last few years in Germany and France.

THE WINE MERCHANT'S ARGUMENT.

The News Letter viewing the controversy of prices from the wine merchants' standpoint says:

Viticulture in California, like every other new industry, has had its ups and downs. but its prosperity seems now to be more generally assured than at any previous time. The growing of table grapes and the making of raisins have progressed quietly and successfully, the producers working in harmony with the commission merchants and all making money. But little is heard of them except when the craps are being prepared for market and are being shipped East where they are readily absorbed. The growers attend to their business in the country, while the merchants look after the interests of the growers in the cities. But it is not so with the wine makers and the wine merchants. All the year round, and especially after vintage, the usual complaints are made that the merchants are attempting to depress the market, that the makers cannot obtain living figures, that the crop is short, that the demand is increasing, that the merchants' cellars will soon be empty, that it is not fair that one maker should be paid a higher figure than another, and so on. These regular complaints might be kept stereotyped and dumped into the papers at the regular growling season, whether it he about crops, shortage or supplies, vintage or vinegar, banking or bursting, and the rest of them. Now with this constant and renewed grumbling on the part of the wine makers, it is not surprising that the wine merchants stating location, terms, etc.

should begin to kick. It has been rubbed into them long enough in all consience.

The wine merchant is by far the best judge of the condition of the market. dients, and almost in the same proportions He knows the demand, what stocks are in the cellars of the trade, and what will be needed for another year. Every maker thinks that his wine is the best in the State, whereas it is only fit for the vinegar tub, and much good would be done the industry as a whole if it were dumped there. Each maker expects to obtain the highest price for his wine, and because the merchant, knowing what the market demands refuses to accode to the terms of the maker, then he is a Jew, has joined a combination, the ring wants to ruin the producer, and all that sort of rot. The merchant will have no trade without the producer, and he knows it. He has tartaric acid or cream of tartar is added, his name to maintain before the public for the bulk of the wine is placed on the market, with the maker's label, and not the fermentation, and alum to the wine to grower's. His reputation is at stake, and he therefore wants good wine, but he will These infusion wines are produced in not pay a fancy price for an inferior wine. The sale of 50,000 gallons at 35 cents shows what will be given for a first-class article. It is absurd to say that the business does not pay. The fault is chiefly with the maker himself. There is not one man in five hundred among our wine makers who can make wine that is good enough to command thirty-five cents per gallon when it is only a few months old. The makers forget that their wine has to be kept for years by the merchants before it is in a fit condition to sell. The public won't be poisoned. The wine besides being aged, which alone represents considerable loss of interest on a large expenditure, has to be carefully watched and handled which is another item of expense. Then there is the repacking or bottling for export or for market the cost of corks, labels, bottles and many other incidental items, all of which fall upon the merchant and not upon the maker. These expenditures form a very considerable sum in a large cellar, but they are lost sight of cutirely by the maker when he wants to sell. The average value of wine exported from San Francisco is forty cents per gallon, and the price now paid for ordinary new wine is from twenty to twenty-five cents. When the aforementioned expenses are added so the original cost, and it is considered that the merchant has to keep the wine on hand for two or three years, it will be seen that the margin of profit is not so enormous as the makers would have us believe. The first-class wine makers in the State can be pretty well counted upon the fingers of both hands. What we advise the remainder to do is to growl less and to devote their time to study. ing how to make better wine. Then they will receive higher prices and cease to complain at those who are anxious to work in harmony with them and in the interests of the industry-the wine merchants.

> Business in Cette has been very dull, and wines have been sold for a great deal less than experts have valued them. It is feared that business will remain very bad until the fear of a war is set at rest.

Country Board Wanted.

A family in the city desiring to spend a few weeks in the country wish to find accommodations with some private family on a farm, within easy distance of a line of railroad. Address X. this office,

The following is in continuation of the translation made by Mr. L. D. Combe for the Sanda Chem Villey, from the Global's Chair & Hallion

From the preceding facts, we are already able to formulate the following rules upon the results of thes hybridizations. The crosses of European vines with Ripais or Rupestris produce in 96 to 98 per cent, of cases, hybrids with fruits and clusters too small, and whose resistance to phylloxera is insufficient, while the reverse in the case for resistance to perce spirer. However two or three per cent, of those hybrids, approach in greater measure on of the parents by one orgin and the other by another organ, so that it may be hoped, by such manuer t at a plant may be obtained. of direct production, gift d at the same time with the faculty of resisting phyllovers and mildew, and of producing fruit in amptable quantity and quality.

Thus in brief, is summed up the result that may be expected from crosses of European vines with Riparia and Rupestris in their first generation. We must not forget that 50 per cent, at least of hybrids old ained are males and consequently sterile, besid s 25 per cent, are generally of insufficient minate, nor do all the fecundations succeed. it will be seen that the creation of a hybrid vegetation, and as the seeds do not all germinate, nor do all the fecinations succeed. of some value, in the first generation is undoubtedly a difficult and somewhat uncertain undertaking.

Fortunately, nature's resources are infinite, and among the surprising properties of organized beings and undoubtedly the most prolific in results of all kinds, is sexual reproduction.

We said that 96 or 98 percent, of hybrids produced in the first generation such small bunches and small fruit as to be unfit for direct reproduction. Shall we therefore destroy them? Can we not do something with them? Certainly and an excellent use may be made of them as I will presently demonstrate.

Another physiological law, as solidly established as the one just discussed, teaches us that in the immense generality of cases, often 90 out of 100, when we sow the fecundated seeds of hybrids of the first or second generation, the product of such seeds will retrograde more or less completely towards the paternal or maternal type. Consequently, if for instance we sow the seeds of the hybrid Chasselas-Rupestris, we shall have plants very notably different from the primitive hybrid, whence the seeds were obtained, some of which will reapproach the Chasselas while others the Rubestris.

Some one will here say, that this is of no interest to them, that masmuch as the hybrid of several generations has retrograded towards the first parents, the root must have done the same and its resistance to phylloxera be so diminished as to be unexceptable as compared with those of the first generation.

This objection, though apparently of a serious nature, is absolutely without any foundation.

All the botanic naturalists, who for the last century go on repeatedly with their thousands of experiments in hybridization, unaminously recognize that the retrogradation of hybrids to the types of their respective progenitors (atavison) is not verified for the schole or the totality of the hybrid, as sent for to attend a case of obstinate noses with us they remind sightly resix

produced by seed, they vary, it is true, but j et dute the a strib. still do not cease to preserve during a more | Don't in good a "common odd." it in o so varied and so surprising. Thus, owing ton graits of D vills p wire, and cover to the variability of the hybrids by fragments, and the principle thus involved, the shpet I had in view for the last seven years, may be observed to have become iccessible. Little do we care if the hybrids of the first generation seem to have but the virtue of their parents; we are sure to see them reappear in the s could or third generation. Thus, instead of disarding them as usoless, we shall carefully cultivate them and obtain their seeds, beans, w hav every reason to hope that their progeny will become their superior in hy is aspects. In the last Congress of Bord aux in 1887, I ask if for nine years to solve the great problem before us. I hope now that there will be no need of putting iff very far the result. The first generation is made and is bearing fruit now. With Mr. de Grasset we will sow this year 10,000 seeds and maxt year 50,000.

From such numbers of plants of the second generation will be so numerous in two or three years, that I feel assured, butle difficulty will be encountered in discovering the long sought for White Dove, a vine with American roots and leaves, thus proof against phyllexera and mildew, and Enropean fruit source of new prosperity.

But were it necessary to wait until the third generation, some three or four years, so slow for us, do not count but as moments in the chronology of species and hybrids we shall have to be satisfied. Let the viticulturists have as much patience as we had, and propose to have, as we are resolved, if we find a new vine to viticulture not to publish the fact until after sufficient varied and lengthy experiments, in order that we may not have the blame of giving occasion to new illusions.

SOME DON'TS

Don't injer because a certain remedy positively care you.

Don't use alleged "disinfectants" that simply smell stronger that the odors you desire to abate.

Don't drink whiskey in cold weather alcohol lowers the body temperature.

Don't purchase vegetables or fruit even ever so slightly "specked." The removal of the spoiled parts does not remedy the decomposition that has began in the entire fruit or vegetable.

Don't neglect to have your dentist examine your teeth at least once every three on account of build and maid we have months.

grows peevish or irritable, when your sleepstrongly and your pulse grows intermittent Under those circumstances, consult your until fanyri, is a not it, who is a tall physician, and if he gives you drugs and grape, in the my markets. Bunches, large him to the dogs with his physic.

following, while awaiting your physician, sweet while ready tipe, with a sprightly

separate or pass or fragments of the individs head, cloths wring at a free-water applied and good seasons, very fruitful. Clay above and bybrils, justiy said Naudin a mast r of to the forchead and two fingers upon the shale, or gravelly and somissandy soils, the seconds, are M saids alongs do an organ lips, the tips of the firsters printing to the second set adapted to its successful culture decidelly of paternal type is presented nestrils and pressing the up firmly against anoth r as markedly of the maternal, the lens b neath it. If the flow of blood the lake shores, below the late spring and Therefore, when these hybrids are re- is siver, its water may it frequently in- arry autumn frest lines. Of late years,

or less protracted series of generations, head to even fate presuments. At help tron of some crowers, been partially suptheir Marie constitution, hence those in- time tak a h t most of toot-bath, fostowed planted by the Concord and some other finite variations, approximations, contrasts by a hot be given by a raries of quanto or varieties yourself there along. If y a are not perfeetly went in the nearming remain about and send for y or physician. If not within reach of a physica a take of some time to be salts, or create of magnesia, until froeffect is produced. Druck explously of flax-seed or suppervolumba, and take a quarter of a Laff t aspectful of syrup of specae every two or three hours, with a grain or two of quitane, paint the upper part of the chest with strong fincture of iodine, or rub it the renghly with oil of tur-

Don't think that any prowess is manifested or b nefit deriv i from the use of about trical batt riss in the manner you are invited to, at public fairs and pleasure r sorts.

GRAPES

Origin of Popular Varieties

The Ul time a is now giving the origin and a brief description of all the leading varieties of grapes that are principally cultivated in the Eastern States. They will be noticed in alphabetical order,

Aparam Begers Hybrid No. 15 originated by E. S. Rogers, of Salem, Muss., and by him regarded as his best grap . until the introduction of the " sil m. Brownish red or marcon color, of the Hamburg er ss. Jameh s. m.dium tolling compact, and ofth should relieve t sprightly and arematic; pr lustive and vigorous; succeeds but with long printing

Brighton-Raised by Jacob Moore, of Brighton, N. Y. A cross of the Concord and Diana-Hamburg. A fine and handsome grape: very hardy, a rapid and vigorous grower, and ripens early: a coppery amber in color; bunch, medium to large, berries the same, sweet, pucy, and slightly aromatic, best flavor when first uper as early as the Hartford Prolific, and before the Deleware. It is a popular table grape cured a case similar to yours, that it will in the Eastern States, where it is largely produced. In severe winters, however, it requires protection.

Casarba. This old and will-known vamety is a native of North Caroana, and takes its name from the Catawba River. It was transplant d from its wild I easily to warden at Clarksburg, Mil., and intreduced to the pulme over six'y years ago, by Maj. John Adams, of Gorgetown, D. C., and has for many years been to standard wine grape of the country but has had to b al indoned in some sections as in Ohicannos where it will finly matter, and is Don't contione at your business or work not suited to those discuss there are few when your appetite fails, when your temper if any, but it is note if smaller varieties It thourish a remark day well in far rate is disturbed, when your heart palpitates positions on the shores of Lakes Korbar Senies and their dags, and it is tracks allows you to continue your wire, throw moderately compact, and shouldered be ries, allow medium size, r and deep red Don't employ any other means than the with load colored too north sn, rich, in y

HYBRIDIZATION OF AMERICAN might be supposed by the objection, but fireblood as a cross single lacked over the evigorous grower, and inflavorable simulations, n sunny slopes, in the near preximity of because of its particularity of soils and I hatt no the Catcala has, in the estima-

Synchymous with Worthingn | In the year 1821, Hon. Hugh White, then in Hamilton College, N. Y., planted a a dang vine in the grounds of Prof. Noves, on College Hill, which is still there and is the original of the Chinton grape Color, black; bunches, melium or smail, compact and shouldered, berries, round, below medium size; skin thin and tough; d-sh juicy, brisk and vinous in taste and somewhat acid, sweet r when grown further south colors carly, but should haug late in order to become entirely ripe; vigorous, harly and productive; makes a fair lark-red wine, that improves with age; not ctable graps

Conside The most popular American grape, and flourishes over the widest territory of any other variety. It was originatod by E. W. Bull, of Concerd, Mass., who exhibited it for the first time on the 20th of September, 1853, at the 25th annual valutation of the Massachusetts Horticultural Society, in Boston Common. Bunch, large, shouldered rather compact; berries, large, round and black; covered with a heavy, rich-blue bloom; skin, thin and easily broken; firsh, sweet, pulpy and tend ri colors about two weeks betere the Batawha, but should not be picked too on, as only pert of ripeness developes its b st qualities. Vines, very strong, rampint growers; coars . Leavy foliage, darkgreen above, and rusty I oking beneath; very hardy, healthy and immensely probunye, mikes a lightered wine, which can is produced cheaply, and is very palatable and refreshing. This is becoming one of the bading grapes of our wn and the Huds in Riv r region, and of late years sells, as a table grap , nearly as well as will as most of the other standard various, but not so high for wine-making purposes.

The proves - R at erigin unknown. was found, many years ago, in the garden of Paul II Provast Fronthonon, N. J., who had immigrated from Switzerland, and trought with him many varieties of foreign grapes, which he cultivated in his grounds, and this may have been one of th number. It was first brought into notice by Mr. A Themps is of Delaware, Ohio, and hence its name. It is considered no of the very best of Andrican grapes, and sooms almost except from rot and ther discusses, except milden when allowed to over-bear, but it has not succeed over as well a range of country as the Concord and some later varieties. As more vance can be set to the acre, however, it can be made nearly as large a producer is the average standards. Bin the small to in law, and compact berries, below melium and round skin, thin, but to ias pulp, sweet on their may tech and vancus, coordinated the decretor jurjush maron, our of with a thin white bloom It is not but harships or activity but sprightly agreed by and aroreate in flavor, ripens, any, alout eight days aft r Hartford I route, and used the Lest quanty for talls uses and also for



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FRIDAY	

Wanted

By a first-class vineyardist, orchardist and wine-maker, with best references, partnership or take a place on rent, or obtain a responsible position.

For particulars address "A. M." this office.

THE proposal of the British Government to place a tax on bottled wines is looked upon with much dissatisfaction by the French, and M. Faure ex-under Secretary of the State has written to Le Matin protesting against the imposition. The tax, he says, will principally affect France The levying of the tax, Faure claims, will not be justified except under a strained interpretation of the convention of 1882. If the proposal is adopted, reprisals by France will be necessary.

THE erection of a large wine warehouse at St. Helena is now assured. The grape growers will contribute to the project, and a contract with the builders will be entered into at once. This contract calls for a building with storage capacity of 1,000,000 gallons of wine, to be creeted in time for storage of wine crop of '88. This is a movement in right direction and one which should be adopted in other sections of the state. It will benefit the small wine grower, and place him in a more independent position. than that which he holds at present.

In regard to the appointment of Mr. F. Pohndorff, by the United States Government, as a delegate to represent the United States at the International Viticultural, Congress, to be held in Madrid this year, Bonfort's Circular says: "This is decidedly the best appointment to this very important position that could have been made, and we are happy to congratulate Mr. Bayard on his good judgment in selecting Mr. Pohndorff." So say we all.

DURING the present planting season the vineyard acreage in Livermore has been increased by 201 acres. Of these Mr. J. P. Smith, of Olivinia, is accredited with an increase of 185 acres, planted out in Monduse, Columbar, Semillon, Burger, and Folle Blanche. This gives him a total area in vines of 620 acres, ranking Olivinia as the largest vineyard, not only in Alameda. but in this section of the State.

THE USUAL bug bear of the season has appeared in the form of the announcement that a boycott will be enforced by the wine men of this city, against the wine grower. The casus belli is said to be in the tact that some of the wine growers have dared to sell and ship on their own account independent of the middlemen. The proposition is on its face so absurd, that were it not that an attempt has been made to evolve a sensation therefrom, the matter should pass unnoticed.

The fallacy of the statements is selfevident. In the first place there are only the names of three of the wine houses of this city connected with the attempt to lower prices, cut of eight or nine of the large firms which virtualy control the western wine trade. There is nothing to show any organized movement on the part of all the dealers to form a trust, and there is none. The parties whom it is claimed are to be boycotted, are the last in the world who could be injured by such a scheme were it attempted. They have an outlet for their own product, and have as a rule sufficient private capital to move their wine to Africa or elsewhere if they so desire, and it is most unlikely that such a very unnecessary stop would be taken to force the small producer into a corner.

The only trouble arises from the natural desire on the part of the wine seller, to purchase from the wine maker, at as low a price as possible. The market rate at present, it must be admitted, is too low, from 25 to 30 cents per gallon being little enough to pay the country wine grower for his product. The dealer can and does make a large profit at these figures, and on his part the fact should be recognized that by keeping, down the producer at rates which will not permit a liberal profit, the condition of the vineyards them selves is joepardized, which must eventually react against the trade.

The wine grower must, however, bear his share of the blame for a condition of affairs, which permits a few wholesale buy ers to dictate terms to him. The cry has been for years against the wine men of San Francisco: there has nothing further been done. No steps have ever been taken to remedy the trouble. It is useless to contend that there is only one market for our wines: the world is open for trade and good wine sells everywhere. The sole trouble lies in the lack of unanimity among the wine producers. It is within their power to fix a rate for their wines and maintain it, by storage of the surplus crop in a regular system of warehouses, erected for that purpose,

In the interests of California, some measures should be adopted to ensure fair dealing on both sides. If our vinevards, and consequently our wines, are to be kept up to the progressive standard, which must be maintained in the markets against foreign competition, it is more than necessary that the returns to the grower should be such as to cover the heavy expense entailed by carrying on his work as it should be done. It is not sufficient to sit down year after year, and hammer away at the wine merchant, He is running his end of the business in his own interest and for all there is in it If any reforms are to be carried out for the protection of the grower, action is required. It was a surprise to many that this question did not arise in some form for discussion at the late convention. It is one of the greatest importance to the future of viticulture in this State, yet every tongue was tied. The laborer is worthy of his hire in every instance, but in none more so than in the vineyards of California,

Among the latest continental news furnished by the correspondents of Bonfort's Circular is the following: The wines in Burgundy are healthy, which has not been the case with many those of recent years. The summer having been dry, there was less mildew, and consequently less occassion for adopting the usual treatment to chick that discuse, which, although beneficial to the vines, has unvariably been most injurious to the quality of their produce. To this desirable feature it may be added that the wines have fine color, good body, fair maturity, and clean bouquet.

As compared with last year the importations of Bordeaux wines show an increase in both bulk and cases. The importations of German wines continue to increase. The receipts for the first two months of this year are larger than they have ever been for the corresponding time. In Italian wines, the figures also show a decided increase over the past two years. It looks as though it will not be very long before these wines occupy the most conspicuous place among the goods dealt on by the trade. The receipts of Champagne, during the month and for the year show a falling off, from the importations of 1887, by over 8000 cases.

An expert on the Cognac district ex presses the opinion that the greatest part of the damage, that has been caused by phylloxers in that district, might have been avoided by the proper care of the vines. His theory is that the vineyardists called on the vives for a larger productions than they were caperable of furnishing without weakening themselves to a great extent as to render them incapable of resisting the insect. If the cuttings had been properly made the vines would have retained sufficient strength to secure their product in spite of the presence of the scourge in the vineyards. His opinion is that if the vines had been given the proper food, and had not been forced to overwork themselves, they would have gone on producing just as they did before 1878. As it is, even in the present state of the vineyards, with proper care it would only take four or five years to put the vines in as good condition as they were prior to the visitation of the pest. This is clearly shown in some of the estates, which are flourishing, while the whole country around is devastated.

The grape cure, which for years has been looked upon with much favor, in France and Germany, is now beginning to excite much interest in medical circles in the United States. A prominent Eastern wine journal is industriously disseminating informating regarding the peculiar merits of the new cure, which, in a recent article, it claims has become an established fact in this country, as well as in Germany, "every day developing new truths" in support of its wonderful efficiency. The eminent Irving C. Ross, M. D. speaking from personal experience, says of it: "Some years ago, on arriving at Cadiz, after a long 70y age and the monotonous diet of a sailing ship, and my system being greatly reduced, I determined to try for a time a diet consisting almost exclusively of grapes. The result was rapid re-establishment of all the bodily functions, and a feeling of more than ordinary strength and agility. I was prompted while in San Francisco, Cal. to resort to the grape cure for the second time, the result being satisfactory. I recommend the cure to several persons who were much run down from over-work and turists, held in the city under the auspices bad diet, and I had the satisfatcion to see of the State Viticultural Commission.

a rapid gain both in their weight and appetite.

The methodical and rational use of the grape juice it has been demonstrated reconstructs the blood, and builds up the nervous system. It is further recommended for liver and intestinal troubles

An enterprising firm in New York city, has built up quite a trade during the past year in supplying pure juice to invalids. When fresh grapes were available the juice was expressed at the counter, and sold at the rate of five cents per glass, or twentyfive cents a bottle. At the close of the season large quantities of the juice were stored away in a temperature low enough to prevent fermentation.

To this end the process recently patented in California of condensing grape juice by "Evaporation" can be readily adopted. By this process the article is said to keep for an indefinite length of time, can be shipped in kegs or barrels, and when properly diluted with water, will be transferred into a wholesome beverage at once, It can on the other hand be fermented and made into wine exactly like freshly expressed grape

Such a pleasant remedy for the distressing ills of the body, will grow in popularity, with the thorough establishment of its efficacy. It will offer a new and profitable outlet for the surplus product of the Western grape grower,

THE TERMS of several members of the Viticultural Commission having expired, Governor Waterman in revising the list has made some changes. The new board will now consist of: State at Large, M. M. Estee; San Joaquin District. George West; Sonoma, I, de Turk; Los Angeles, L. J. Rose; El Dorado, G. S. Blanchard. By the appointment of Mr. Estee, Mr. Haraszthy, who has been President of the Commission since it was created, was superseded. The reason for this action upon the part of Governor Waterman, is not exactly clear as yet, to those most intimately connected with the wine business, who recognize the capability of the man, and the untiring energy which he has at all times displayed in the discharge of official duties, which carry with them no renumeration, not even travelling expenses being allowed.

The funeral of M. Theophile Roederer, whose death was reported in our last numher, took place in Reims on Tuesday, the 6th inst. The remains were followed to their last resting place in the Protestant cemetry of Reims by a numerous cortege of friends. M. Henri Henrot, the Mayor of Reims, acted as chief mourner, and the funeral discourse at the cemetry was pronounced by M. G. Bazin, a friend of the deceased. M. Roederer died of an affection of the lungs which developed itself before the war, notwithstanding which he served with honor, and suffered the privations of a prisoner of war, in spite of the malady that eventually carried him to the grave. He was distinguished for his benevolence, and his memory will be cherished by a large circle of friends. He was fortysix years old at the time of his death.

The paper entitled "So-called Sherry Flavors in Wines," should have been accredited last week to Mr. E. H.Rixford the Secretaryof the Vine growers and Wine makers Association of California. It was read by him before the late Convention of Vitical-

KOHLER AND FROHLING,

Of this well-known firm the Vers Letter Bays: On the twentieth of this month a co partnership was formed, consisting of Elisa Kohler, widow of Charles Kohler, Hermann Bohrmann, of New York, Mrs. Nobber's son-in-law, Hans H K dil r and Charles Kohler, of this city. Mr Bohmann will attend to the interests of the firm in New York, where the demand for wines of this house is increasing to an extent that requires the most energetic management on this side to supply them. Over 500,000 gallons of assorted wines and 30,000 gallons of brandy has been shipp d during the past year to the New York house. This immense demand nec ssituted the moving of the firm's headquarters in N w York on Barelay street, which admitted of a storagof about 450,000 gallons, to larger cellars, 4145 Broadway, whose capacity is over 300,000 gallons. In the latter cellar are the latest improvements, consisting of steam heaters, electric lights and pumps. and moving large packages by the same agent. It is not an exaggeration to state that this Broadway wine collar is the most perfect in the East, and has been announced by all who have seen it a m defection The business in San Francisco is conducted by Messrs, Hans and Charles Kehler, whose principal vineyard is in Senoma county, near Glen Ellen. These gentlemen have had a thorough edication in the wine business from the lowest round in the i.i.d. der to cellar-master, and in the vineyar l from ordinary labor to the netual manufacturing of the wines. Their knowledge, therefore, of wines and wine making is not only a theoretical, but an eminerally practical one. And in their absence their interests are in the hands of Mr. H. C. Jordan, who has been in the firm's employ for a number of years, and who has a thorough and efficient knowledge of this important industry. The aim of the present firm in future, as in the past, shall be that of their father's, namely, the making of pure wines and the advancement of California's reputation in this regard. This will be the noblest monument that can be creeted to the memory of the pioneer in California wine manufacture, Charl & Kohler, and the realization of his carnest and enthusiastic efforts.

THE COST of drilling a gas well is usually from \$3,500 to \$6,000. The method pursued is the same as of an oil well. The weight of the drills, with the attached tirs. is about 3,000 to 4,000 pounds. These rise and fall about four or five feet, and are constantly rotated, so as to bring the bit into contact with circumference of the drilling. For a depth of 500 feet, the hab is bored 8 inches in diameter and is case I with 5 . piping. Beyond this depth the hole is continued with a diamet r of six inches, until gas is reached or the well abandoned. A casting of 4-inch paping is used for this lower portion. Under ordinary circumstances, about fifty days are required for the drilling.

As attomatic class record r has been produced by Dr. Wurst mberger, of Zurich An ingenous electrical arrangement, prints on a strip of paper the index number and letter of the square from and to which the piece is moved, and moves of the black pieces have a diff rent place on the tayfrom those of the white

Subscribe for the Mercuant.

A NEW GRAPI

Moore E. Gebrand Barry, of Rochel ester, N. Y., announce a new and valuable $_{1}$ trolled by the Busin $\sim D/\chi_{\rm CC}$ graph to be known as "The Mills Grape," The Marysville Applications for which novel and distinct characteristics—subject says, are claimed, namely, that it possesses the Some vary in a near hazard high quality s of a foreign grape, in ad- pleas. In every t winth a dition to or a combination with, the vigor who think their advertism a rightand perfectiveness of the hest native was should govern the owns of the

While the propagators of this new can- forms of markal membershell to for grape growing favor do not pre- about the most party and sain to say that it will succeed in all soils, "newspaper" should paraish. situations and climates, they do believe thought of cut rangeto the mark that in a camate similar to ours, and with anybody. The chief test of the a reas hable good soil, situation and treat-feature of any piles of news is its ment, such as every grape should have, it and importance to the ressection paper cannot fall to give satisfaction. It is ess readers. It is a poor old a wear of san portally a commanded to those who desire mothing but what saits his in hor and a coni grape of high quality and are willing to or tastes, and it what is where bestow up not the care it deserves.

This new grape, which is offered this year for the first time, was originated by Mr. Wr vam H. Mr. s, of Hampton, Ont , by possing Muscat-Hamburgh with Creveling. Bunch, very large, compact, shoulbred, some clusters weighing over twelve projudices or their probability same s. Berry, Large, round, pt black. covered with a thick bloom; flesh, firm, meaty, julcy, breaking with a rich, sprightly thay r. Shim, thick: berries adhere firmly to the stan. Vinc, vigorous and productive: foliage large and healthy, Ripens about with the Concord, or a little later, and is a long keeper.

LESTS FOR ATTALLEY OF SEEDS

A 'ol, to of the Outerio Agricultural I ill $_{\infty}$ ϕ at any among other valuable matter, the following, to test the vitality of

1. Plac on hundred seeds between sheets of Hotting paper laid on sand, and keep the paper damp in a place where the temperature is about 76 to 85 degrees. Falireule it. The number of seeds germinating and make at the percentage good.

2. Place the sec Is on a paces of flannel in a say, it, with sufficient water to moisten it thoroughly. After scattering the scolls (on bundled on the flumel, put a piece of damy Cottnesspaper over the whole and place from warmers on a Koop it continually damp, and in a short time the sords will genual at , the number sprouting will be the percurace of good well.

The comming's deas to purity, scatter them on a pass of black curd board, and the foreign grains are readily observed. If a good collection of soods true to their kitel, is kept for comparison, the impurthes can't a usily identified.

The results of various tests in the germibut rar givin. The following informers will practically cover the whole ground,

A + has a marked offect on the vitality of

Maley we is have lost much of their vitality tr in improper curing or other causes.

To be a whold is not reliable for seed, for ev note : the germanating a fair per cent, of ere when the field is of a more or besweaker teature. All seeds should be tested. factorists in Lourity.

A small percutage of impure seeds means y ry many machushel.

Au tralia has son. Leint outerpillars. Mr. A. S. O off, of Sidney, mentions one moth larvi, abundant during the past seasome live seems has ling, and specisure right mich is in length.

HONORABLE JOURNALISM

The Eliterral Re in L 1

paper in the prime district in advirtis rito dietati (to) news which shall or shoe. A paper can be the rather letesting of any alvairs a tall the value of its news diportional tornal columns in page 1 of figh.

S weral years ago, in the conversation, a venerable of last paper preprietor, of Son France. how the young Matadays or a along in the management of the Se was till that they were most quising that indiscreet," "Well," random with with cran, " indiscrete n oft in pays or de ac-spaper business." And he is noted for his agution.

The Box is a case in point. It is than iding and bumptions, and one in) , . - about in a very unpheasure way, etc. in or making people afraid that it is going t string. It has a hist of chinais, and is making more all the time. But it is a business point of view the Box is a sure asand its circulation is a market princip an evening paper publish dark a lity. Sheramento's size, Proposition (6 to 5) pendence, beldness and certery is a literature. memy who find foult with it still east at read it. If less bumptions the probably pay still better and 1. the atial, but should it be no trail. truckling, and allowits of tobes in the advisors, it would certainly leavest in-

NEW RESISTANT VINES

The San Transisco P. 3. cuttings have been to be . If the Vitte ultar d. C. ferman $\langle r_{ij} \rangle = -1$ reports of the merits of the x not been exaggerated. Carronia ists with in the bowning propagations of the $L^{\infty}(X,S)$ at (tings are known as the New Mex. the Bertandheir. The steams $\tau_{\rm eff}$ phyllox moresistint, and pass vantages which will room in high Novo grows on the Par Herbert L. and it thrives there, with much rare the fallen in some sometis i that two years. The entrings rate will wishout sucking, air stead large stocks. The total stock the ability of the variety $\gamma < \omega$ from deep in the earth of stock to table mater. The lebest suited for charley or the exports those at had pr than the Casi am cont V.

THE WELL TANGERS OF tion in the Eastern State and Lat

HOW PETROLITY WAS FORMED

I loy Prof. Mend bod, of produced by produced by profits the earth's crust at at with the glowing carthe specially of iron. The . I into its constituent . i. uniting with the iron, till E. E. Len takes up the carbon A shigh rivigion, where part Tinte min ration, and part s had and gas, to escape wherever to a rate to find an outlet. If this to not, and a sufficient store alibs is contained in the 1 to both may continue to st in b finitely and continue - dry fifed long after the suphas been exhausted. Prof. forp its his si wally producing it in a manner similar to then he believes the matural pro-

V. NEW MILLIARY BATTON

Vi to . . Tre ne within the limit of the ". Comman Army Corps have now in a provibil with larger samples of the the article of foll which is in future to in the searched circulation" of the men is the field. It is a peculiar kind of bread, in the ships of small cuies the size of a he dr p, mob of time wheat bread, strone ly state dramatic dentated to keep for and the analysis when taken into the month it is a coy oftens, and is both palatable and hiv iters. It is he fly intended for forced ile, to to the it is no time for campor only kitz.

See Lucyerson April 2, 1888

The Brief strot more hantib agency reports 170 facoures no Pacific Coast States and To int ross for the first quarter of 1885 is a seets 3510 711 and a sighties \$12,346. * 701 is computed with 153 for the previous cart r with assets \$750.530 and habilities \$1. . 6.133 and 210 for the corresponding mark r of 1887 with assets \$510,922 and

In far'us a for the past quarter are sub-blam by the States and Territories

~510 11,00 ±1,346,701,00

Assumed in Bufforts Chair says it is in the " " " the mask weep" to arit of rusins and "unferin I in the eliministration it, as is boing done in thoufor it has today, as a substitute s. I is the Savi ar adopted re His bath. Sarely the car are when the followers or the property His the hings, if the two examples He set to man.

d North American birds are M. J. M. Hashronskus missing. is to graticik and the Labraof the end to have be some exthe forward eight, through the best with forther, story comens, and are It. carbonated warstall heatel : Bun in a worlder,

FREEDOM OF VINEYARDS.

Grapes are not more plentiful or common in this country than in many places in Europe, yet there is a freedom excreised with them here, that would in most any other country, amount to absolute larceny. Here, men, women and children make free use of them whenever they are in reach and think it perfectly right. If they are permitted to enter a vineyard, they pick and eat from the best clusters of choic, st varieties, that makes the grower sorry that he went to so much expense and trouble in growing them. Again, those who work in picking grapes-usually hoys-those who engage in carrying th.m to the fruit houses. and then the girls who trim and pack them for market, seem to vie with other in eating the largest quantity, and in the case of the boys they oftentimes scatter them on the ground or throw them at each other in play, never cariog a moment for the severe loss to the grower. In this way many tons of the choicest fruit are annually consumed and destroyed, which materially reduces the net profits of the vineyards, leaving only a scanty compensation for his season's industry and economy.

But this practice and indulgence is very different in other countries where more strict rules of right and justice are observed and enforced. W.D. Howels, in a very interesting and instructive letter, describing some features of grape growing in Switzerland, published in Harp, r's Magazine for February

A friend in London had congratulated us upon going to the Vaud, in the grape season For three pence" he said, " they will let on go into the vincyar Is and get all the grapes you can hold" Arriving upon the grounds, we learned it was six fraces fine to touch a grap in the vinewards: that very field had a watch set in it, who popd up between the vines from time to time, and interrogated the vicinity with an eye of sleepless vigilance; and the small boys of suspicious character, whose pleasure or usiness took them through a vineyard, were obliged to hold up their hands as they passed like the victims of a far-west road agency. As the laws and usages governing the grape culture run back to the time of the Romans, who brought the vine into the Vaud. Iwas obliged to refer my friend's legend of cheapness and treedom to an earlier period, whose custom we could not profit by. In point of fact, I could buy more grapes for threepence in London than in the Vaud,"

Of course we could not approve any such degree of strictness here in this land of plenty, but a little more observance of and respect for the property rights of grape growers in the valuable product of their tabors. would most certainly ensure more satisfactory and profitable results."

For a cough, boil one ounce of flaxseed in a pint of water, strain and add a little honey, one ounce of rock candy, and the juice of 3 lemons; mix and boil well. Drink as hot as possible.

POWER OF MOSOPOLY

When capitalists, remarks the N. Y. Herald combine to control the market, they crowd scores of little fellows to the wall in order to make their control more complete and kill the spirit of competition. The small dealer is doomed, and we are govern ed by a syndicate that squeezes tens of millions out of our necessities. If we want sngar, envelopes, milk, fin, lead, copper, or what not, we must doff our hats to these imperialists and beg them to serve us at their own price. Look at it how you will, trusts mean war against the best interests of the community. If we don't abolish them they will abolish us. It may be a long fight and a hard fight, but it is a fight worth fighting. A monopolist is just as much an enemy to orderly society, as an nearchist. The latter blows us to smitherreens by a single explosion, the former lays us under tribute and compels every man, woman and child to add to his bank ac-

D. B. Wier, an excellent grape growing authority, says: "As a rule, soils have enough lime for the grape. Where there is plenty already it would do no good, and no harm, unless applied in great excess. Where lime is wanting, or the land has a tendency to sourness or muckiness, it would be of benefit. One peculiar value of applieations of lime where the season is short, is that it induces early and sound ripening of woody growth.

TEMPERANCE AS, FANATICISM

Rev. B. W. R. Taylor, of Riverside, is the target of some round and even savage criticism these days, says the Sacramento Bee, because he ventured to intimute that prohibition is considerable of a farce, and that it is incompetent to effect the object of its advocates. It is not surprising to find a man so fearless as to tell his teototal congregation so wholesome and palpable a truth denounced and distribed as if he had committed high treason in time of war. That is, unfortunately for genuine temperance reform, the usual style of the prohibitionists. They gain a step in the way of reform and then lose two by their brutal iotolerance and ill-advised hotheadedoess. There can be no doubt among thinking people that the consumption of wines as a means of supplanting the stronger liquors is a practical, sensible proposition and the best kind of an aid to orthodox temperance. But the particular language that worried the ill-tempered zealots was this:

I do believe that God gave us the fruit of the vine for other uses besides eating them as grapes and making raisins. "wine that maketh glad the heart of man" is spoken of in the same passage of scrip-ture as corn and oil, and referred to as gifts of God.

Aside from the rather clumsy effort to fix upon the Almight a responsibility that is more likely to be porely human, Dr. Taylor is undoubtedly on the right road. He advises those who believes in legislation as a safeguard against drunkeness, that the hest way to do would be to legislate against whiskey, rum, brandy, and gin, while at the same time, encouraging the general use of wines. If temperance is ever to be the ideal condition of life it will never be through the savage denunciation and mad intolerance of those who assume to lead erusade against alcoholic intoxication. As Dr. Taylor well says: "There is a great deal more in the ressoning of those who advocate the general use of light wines than might appear at first thought." Stripped of fanaticism, temperance might theu become a national practice under the away of which inebriety would lose the terrors it now includes. The saloon would soon cease to be the abiding place of the besotted who neglect those dependent upon them and in their degredation ignore every other duty and responsibility of life. It will never be in California that popular sentiment will uphold the rapid demands of the prohibitionists. Dr. Saylor will find more followers than the men who now revile him.

EAST BOUND THROUGH FREIGHT. Forwarded by the Southern Pacific Co., Mar. 1888.

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Beans
Books and Stationery. 1.485,6501.698,460 143,520 1,050 66,020 510 1,230 Borax ...
Brandy ...
Canned Goods ...
China Merchandise Chocolate ... 134,190 8,110 71,600 162,060 233,670 50,200 \$20,020 93,750 23,030 12,030 Cigara... Clothing, California Manufactured Coffee, Green... 25,910 501,450Copper, Cement Drugs and Herbs. 2,000 930 1,110 21,390 6,660 Empty Packages
Fish Pickled 100,000 40,000 1,580 1,874,460 Fish Pickled Fruit, Dried. Citrus. 100.550 164.19035,650 3,206,700 19,490 Fuse.
Glue.
Hair.
Hardware. 6,130 64,140 45,430 101.900 Hides..... 163,640 24,620Hops..... 4,9_0 2,490 162,260 15,610 Leather Scrap Lumber Machinery 22,600 21,570 347,630 220,560 201,230 2,140 77,010 3,560 Machinery
Math
Machinery
Math
Merchandise, Asiatic (in bond).
Miscellaneous.
Mohair
Mustard Seed.
Nots
Oil Fish
Oil, Whale
Ores.
Powder
Quicksilver
Raisins
Rice
Salmon, Cannel
Seed.
Shingles.
Silk
Silk Goods
Skins and Furs 9,570 98.210 21.920 45.930 6.020 25,620 67,150 78,900 7,870 896,770 3,520 1,800 24,270 60,080 40.590

Recapitulation.

395,830

1,161,720 50,400

San Francisco. Oakland. 26,392,060

Skins and Furs.....

5,276,130 176,290 52,340 146,540

26,392,060

16.060

Los Angeles.

3,360

3,161,750

1,806,290 5,555,890

4,096,950

2,020,680

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42,300

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766.460

69,670

2,450

3,161,750

43.661.220

3,690

77.560

3,900

550.040

Newspapers in 1888.

From the edition of Geo. P. Rowell & Co's "American Newspaper Directory," published April 2d. (its twentieth year), it appears that the Newspapers and Periodicals of all kinds issued in the United States and Canada, now number 16,310, showing a gain of 890 during the 12 months and of 7,136 in 10 years.

The publishers of the Directory assert that the impression that when the proprietor of a newspaper undertakes to state what has been his exact circulation, he does not generally tell the truth is an erroneous one, and they conspicuouly offer a reward of \$100 for every justance in their book for this year, where it can be shown that the detailed report received from a publisher waa untrue.

THE PHYLLOXERA has been discovered in a number of new places in Hangary.

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OUTSIDE RIVERS.

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"SILVERSIDE" BRAND,

BATH CANNINC CO,

CARDINER PKC CO,

HERA PKC CO,

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"TOMAHAWK" BRAND, SUNNYSIDE PKG CO.

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COMPANY

SKEENA RIVER.
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We also offer For Sale of Other Columbia. Sacramento and Fraser River Salmon:

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I X L,
Pillar Rock Pkg Co.,
Geo. T. Meyers,
Ocean Canning Co.
Badolett & Co., (Flats),

Washington Pkg Co's "Favorite"
Brand,
"Epicure" brand,
Pacific Union Pkg Co.,
Cutting Pkg Co's "Cocktail" Flats,
A. Lusk & Co's pack,
"Mermaid" brand,

Scandinavian Pkg Co.; West Coast Pkg Co., Warren & Co., "Carquinez" brand; Point Adams, Wadham's Fraser River.

ALASKA FISH.

Karluk Pkg Co., "Challenge" brand. Arctic Pkg Co., Arctic Pkg Co's "King" Salmon.

We also have the "O & O" brand, an outside river fish, and many other brands, that can be had on application.

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Colton Cannery, J. Lusk Canning Co, San Mateo Pkg Co,
Sierra Madre Packing Co, Santa Clara Packing Co

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OUR NATIVE WINE SHIPMENTS SEA.

PER P. M. S. S. CO'S STEAMER SAN BLAS, MARCH 27th, 1888.

TO NEW YORK

MARKS,	SHIPPERS	PACKAGES AND CONTENTS.	GALLONS	VALUE
in diamond.	Lachman & Co	12 barrels Wine		
4.4	64	1 half barrel Wine	6116	~21
in diamond	**	S barrels Wine	404	24
V Co	Schilling & Co	200 barrels Witte,		3,40
4.5	**	25 casks Wine	2,638	95
G	Carps & Co	28 barrels Wine	1,244	15
11	**	I half-barrel Brandy	25	, i
М	**	25 barrels Wine	1,200	:37
& S S	**	25 ca es Wine		- 51
**	14	Look Wine	60	:3
G 1	achman & Jacob	38 barrels Wine	1,855	91
11	**	As barrels Wine		
6.6	+ 6	S 4 puncheons Wine f	1,769	88
Py	enermand Bros	65 barrels Wine	3,328	1,03
m diamond I	Cohjer & Van Bergen.	200 barrels Wine	9,931	19,1303
М		50 larrels Wine	2,493	2,19
m diamond C	al. Transfer Co	72 barrels Wine	4,300	2,50
D: Co 1	Hersfins & Co	25 half barrels Brandy	615	12
	Gundlach & Co	90 barrels Wine }		
44	14	1 kg2 Wme)	4,308	1,66
	**	10 puncheons Wine	1,612	1,21
& F	Sohler & Frobling	200 barrels Wine	10,184	3,65
B & Co V	Villiams.Dimond & Co.	'I casks Wing	240,	1:2
В		G casks Wine		
t & Co	*1	14 casks Wine		
J		2 casks Wine	1	
T & Cc	4+	I casks Wine	1,110	52
Tota' amount of Wine, 23	5 cases and		55,866	830,70
Total amount of Brandy.			670	17

TO CEST	TAL AMERICA.		
N S. Corinto A Greenhaum & C.	1 case Whiskey		\$8
D D, Corinto	2 half barrels Wine,	51	35
11	1 case Whiskey		13
41	5 cases Wine		34
J & J, Corinto Sperry & Co	3 kees Wine.	45	20
J D, Puntas Arenas Urruela & Urioste	4 barrels Wine	80	60
J S, Acajutla	2 cases Whiskey		78
K A, Champerico McCarthy Bros & C	Co., 14 cases Wine		49
A Co, Acajutta Wilmerding & Co	1 barrel Brandy	49	124
B K, Acajutla	1 barrel Whiskey	38	152
T M P, Acajutla	1 barrel Whiskey	39	158
E H, La Libertad John T Wright			162
J A, Champerico E L G Steele & Co	i kers Wine	60	10
E A, La Libertad habrera, Koma &	Co. 13 barrels Wine	60	60
F E & Co Gallegos Wine Co.	100 kegs Wine 1	,GUO	820
Puntas Arenas	2 kegs Wine	24	12
D J, Acajutla J II Dieckman	10 cases Whiskey,	24	115
A L & Co, Acajutla	I keg Wine	3-1	23
F M, Acajutla B Dreyfus & Co	10 kers Wine	100	110
H D. Acajutla.	7 half barrels Wine	188	170
11	I barrel Brandy	47	130
J M. Acajutla	2 barrels Wine	97	110
C F, Acajutla	3 half barrels Wine		
· ·	2 kegs Wine	112	
S G, Acajutla	ti cases Wine		130
F A, Corinto J Gundlach & Co.		95	25
L L S, Puntas Arenas Koh er & Frohling	2 casks Wine	651	78
D D D, I tillion trendo			53
Total amount of Wing 25 cases and		611,-	
Total amount of Brandy		96	\$1,809
Total amount of Whiskey 10 cases and		101	251
A COMPANY OF THE CASE OF THE C			

								-
PE	B HAWAIIAN	STEAMER	AUSTRALIA	FOR	HONOLULU,	March	27th,	1558.

M W A			30	\$32
W C P	E Drevfus	5 barrels Wine	- 1	
64		12 half-barrels Wine	į.	
4.6	44	90 kegs Wine		
44	*1	50 ke_s Wine	1,705	1,200
G J W	. C Carps & Co	5 puncheon Wine	58	35
М М	** **	% cask wine	34	20
Rev F L	J Pinet	2 half casks Wine	70	39
G W M & Co	Lilienthal & Co	110 cases Whiskey	1	1,035
64	Spruance, Stanley & Co.	55 cases Whiskey		434
L & Co	**	12 cases Wh skey		96
**	+ 5	5 half-1 arrels Whiskey		277
F A S & Co	C Shilling & Co	3 casks Wine	184	125
W W		1 cases Wine	- 1	24
		95 kegs Wine	475	475
**	**	30 kegs Wine	300	300
44	14	6 half-barrels Wine	162	160
11	**	20 cases Wine		100
**	+1	5 cases Wine		25
O in diamond	. Donald Gedge	60 kegs Wine	400	365
		5 cases Wine	1	35
P C C			27	10
			3,443	\$2,920
Total amount of Brand	y, 5 cases and		1	25
Total amount of Whisk	tey, 117 cases and			1.842

PER P. M. S. S. CO'S STEAMER SAN JOSE, APRIL 5th, 1888:

TO NE	W YORK.		
K A Erz	. 25 barrels Wine	1,215	822
P C Carpy & Co	10 barrels Wine	450	1:
? B & S	15 barrels Wine	720	25
F M Wm T Coleman & Co		396	21
A B C Carpy & Co	. 11 barrels Wine.	528	23
in diamond Kohler & Van Berger	1. 225 barrels Wine	11,313	11.3
11	10 b irrels Brandy	492	515
BM A G Chanche		60	-
₹ F F Cunco	20 barrels Claret	963	38
· S	20 barrels Caret	963	38
14	I half barrel Brandy	26	
A Ky Lenormand Bros	40 barrels Wine	1.898	5
F D	Z half-barrels Wine	71	
11	1 case Wine	н	
	1 barrels Winc	121	
"	I case Wine	5	
G in diamond S Lathman & Co	. 25 barrels Wine	1,283	3
I F in diamond	50 barrels Wine	2.552	1.03
*1	1 keg Wine	15	
11	1 case Wine		
d in diamond	40 cases Wine	1	1
Z.M "	1 barrel Wine	50	
B B Lachman & Jacobi	25 barrels Wine	1,245	- 5
Diamond	15 barre's Winc	756	3
F A	25 barrels Wine	1,261	:3
J. L	48 barrels Wine	2,379	11
	4 half-barrels Brandy	179	- 2
3 & Co Stetson & Adams		5,060	1.6
J J Gundlach & Co	S barrels Wine	4,242	2,3
Total amount of Wine, 41 cases and		37,614	\$21,9
Total amount of Brandy		627	1.2

	TO CENTRAL AMERICA.		
	C F E, Puntas Arenas. W Loaiza. I barrel Wine A E J, Puntas Arenas. J Gundlach & Co. 5 cases Wine C G, Puntas Arenas. J Gundlach & Co. 5 cases Wine. T de B, Acajutia F Daneri & Co. 9 segs Wine. I case Whiskey. 2 case Brandy. I case Wine. L G, La Libertad E L G Steele & Co. 1 barrel Wine. B B & Co. La Labertad. W L S Haas 2 barrels Whiskey. J L La Libertad. W L S Haas 2 barrels Whiskey. S D, La Labertad. Winerding & Co. 2 barrels Whiskey. S D, La Labertad. Winerding & Co. 2 barrels Winkey. S D, La Labertad. C barrel wine C S M, Camperico. Eng de Sabla & Co. 50 cases Wine.	51 187 45 43 88 79 40 11	23 20 125 45 11 10 56 42 163 318 110 120 150
)	Total amount of Wine, 81 cases and Total amount of Brandy, 2 cases and. Total amount of Whiskey, 1 case and TO MENICO.	326 81 16	8511 246 492
,		5.	210
	X & Co. Manzathan Redington & Co. 1 keg Wine. V H, Manzathan Diannhauser & Co. 2 keg Wine. V H, Manzathan Diannhauser & Co. 2 keg Wine. C R & Co. Manzathan Cabr ra, Roma & Go. 2 casks Claret. P X C, Acabutha W Louiza 2 casks Wine. H A Manzathan 2 casks Wine.	120 124 131	\$10 41 68 81 60
	m - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2	44343	Our

TO MEXICO.		
N & Co, Manzathan Redington & Co 1 keg Winc	5	\$10
V. H., Manzatlan	10	41
C R & Co. Manzatlan Cabrera, Roma & Go 2 casks Claret	120	68
P N C, Acajutla W Louiza 2 casks Wine	124	81
H A Manzitlan " 2 casks Wine	131	60
Total amount of Wine	420	260
TO NORWAY.		
D & B, Christiana Hirschler &Co 30 barrels Wine	1,457	5997

MISCELLANEOUS SHIPMENTS.						
DESTINATION.	VESNEL	RIO.	OALLONS.	VALUE.		
Victoria	W H Dimond. Cmatifia Cropic Bird.	Steamer		\$26 72 233		
Total	***************************************		655	2331		
Total shipments by l'ar	nama steamers		10 gallons \$			

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THE REBUKER SUBUKED

At the Prescot at Church in Riverside, March 25th, the R v. B. W. R Taylor preached a sormon which has been the cause of much discussion in that thriving town. The part of the serm in which has be a most commented on is as follows.

But even high lie nee fails to remove drunkers as from our model, and there or some thoughtful men, who tell us that our legislation is entirely wrong, that we should discriminate between the kinds of liquor against which we begisted, since different kinds of liquor contain different quantities of alcohol, some being directly miurious and others distinctly beneficial And the arguments they bring forward cannot be overbooked. They have a solid mass of facts and statistics which neither prohibition for high licens can show. Their argument, in a nutshell, is this. Increase the tax on whiskey brandy, rum and ard at spirits, and I so in the tax on light wines, ale and beer. This will cheap in the lighter kinds of liquor and make dearer the articles containing the greatest percentage of alcohol. They say that nine out of ten men would prefer to pay five cents for a glass of claret or angelies than twenty five for a glass of whiskey, and it would not do them on -tenth as much harm. There is a couldeal more reasoning in this than appears at first sight, and it is a matter to be well thought over. The advocates of this system. point to England, where brandy, rum, ginand whiskey are cheap and wine is dear, at the most drunken nation on the face of the earth, and to France, Germany, Spain and Italy, where the reverse is the case, as the most temperate. If California, by the manufacture of a pure, light wine, should drive the beastly whiskey business out of the country, don't you think the United States would be far better off, morally, A glass of the grape mice changes all this, physically, socially and financially?

I don't believe the Almighty gave us the golden grain of our harvest fields for the purpose of making whiskey, any more than he gave us the sugar cane for making rum, Man has prestituted the use of these natural productions in manufacturing them into interieants. But I do b h ve that God gave us the fruit of the vine for other purposes beads eating them is grapes and making raisi, s. The "wine that maketh glad the heart of man" is spoken of in the same passage of scripture as c rn and oil, and referred to as gifts of God.

MODERN EXPLOSIVES.

The composition of some of the motern high explosives, according to the Engineers ing, is as follows:

25 of infusorial carth.

Dadlines 80 parts of intro-glycerine and 20 of nitro-cellulose or gun-cotton,

Residence 40 parts intro-glycerine, 49 of intrate of potash or soils, 13 of cellulose, and 7 of paratine

front Powder, 36 quarts of uttro-glycerme 48 of mitrate of potash or soda, 8 of sulphur, and 5 of resitior charcoal.

Mic i Powder; 52 parts nitro glycerine and 45 of pulveriz il mica,

Tonite: 52^{1}_{-4} parts of gan cetten and 47^{+}_{-4} of nitrate of baryta.

Blasting trelatine: 92 parts intro-glycerine and s of enu-cutton

Attas Powder: 75 parts of mire giveering, 21 of woodfibre, 2 of carbonate of magnesia and 2 of nitrate of soda.

Rackarock, 77.7 parts of clorate of potash, and 2273 of nitro-benzol.

It will be noticed that to trive ill the above explicives are composed princip by of intro-glycerine; and it is probable that the talray Adversary, was painted when or adds nothing to the explosive power. The and helicus and wild game were rises. decomposition of intragive in is prichally untures in vincy obstant. cally instantan ous, on lith star acting mitrates and hydrograph as must be but fur Print Lass at this years wire behind when the mass is expleid do The what is known as Aria, 1 hours power of all these substances is die to the periodoxical objuring near gin, which is by tself the mas neutral at largety of all the character, but when forced into chemical combination, usually confers an abment of weakn as up in the cutir molecule of which it forms a part.

AN INTERMINTED WINE

One man of the present deserves well at his day and generation, and that is the man who has brought fresh grape jures in use again. The absolute luxury of a draught of pure grape juice, just as it leaves the press, and fultered from sediment, is only to be judg d by those who have tasted it It is what it purports to be, wholly grape juice, undiluted, unswertened, unfermented delicious as the wine in the claster, innocent as mountain water, hadth giving as the fountain of youth. It is the most beautiful liquid in the world, deep, rich in color as fluid genus; all fermented wines being pale beside it, for they are disabel, while this is the full blood of the grape of sweet and divine od or. Its effect is simply wonderful in restoring strength.

For years, duly, after working up to 11 o'clock mornings, there has come that reaction, the fatigue which writers and nerv ons people know, that no food or medicinever seemed to relieve, and which madthe rest of the day's work a dragging effort, the vineyard, and since then more extensiand on three or four glass s a day I work with an ease and sustained strength which makes me a novelty to mys If It is food | and drink both, hk- mik, only a thousand times better; and, though no vigitarian or dietist, I had rath r hy on crackn Is and grape pure wholly than go without it. batushes full us and dysp pti symptoms, humors and consumptive adments, ak-magic. Here I stop, not for want of more squeeze a pound of grap's in a texel and power of production vitally injurit. The strain the june for dricking it one , it i the imperial court fashion ag is ago. A delightful little hand-pr ss with pore lain seckets, sold for \$2.00; does the work may a better, time people gathe first of this Dynamite, 75 parts of introglycerin, and blissful fluid, there will be no dougloof rusing too many grapes in this country or any other, especially as it is perfectly a to put up this pure grape price so that it will keep unfermented, unchang I, fresh as when it left the cluster, for twenty years. Don't say it can't be don't it has been 1 b. for centuries. You can tast it in New York shops fresh from the press before year eyes, and bottled for years, and you can a choose between the two. The graps greater whose inteling nee provided this trust fir the public has done a very good thin, for his own profit, but a better one for the country, both for growers and consumers. and the most five years will prove the strength of these words to to room trade -

or camphor to fore being wash at-

A SEA OF GRAPE VINES

Northern Canfornia s first viney rd, sayin most cases the other nogodients only region surrounding it was a howling wilderact as absorb ats of this biputh, ord really moss of tall gross, a shrald ry, and for each as gropes in this part of the fit about one handr I mit's north of the d Sacrato lity Liss hwis . . file est promors, and many of his vines or plant I forty y ars ago. They has ture dia worshiful size and yold at m by. The property then fell into the man is of a G rman named Henry Gerke, spraed vincyardist, who made additions to the plant, until there were seventy-field and an grapes. He built a winery, and it became noted throughout the Pacific Carst for th excellence of the wine productd. The Gerke vineyard soon became known as one of the largest in California, and farnish a employment to a large number of men But the property once more changed hands by Smitter Stanford purel, is a gat at S. S. temb r. 1881. His interest and entage as in the development of northern v was great, and his vast wasting him to proceed upon a mostoxt usiv His purchase was not confined to the v yard alone, but thousands of acres p mang land was bought until it was a p ssions amount to fifty-six thousand He wakel a complete revilation in a ranch. The most experience form were employed and set imm hardy ov rhoul the old vineyard and to set n wateres. Hundreds of min were put to work to preparing the land, and tona 1882. to 1884, one thousand acres were all load additions have been made, until now in has nearly four thousand in full to rein king the largest vine yard in the world. It is intended to move said further all a to its and in a few years the Vina vite yard will have no less than five thousand a res.

WINE PRODUCTION IN FRANCE

The artimion of Benefor's tire or has en called by Mosses, Denas, Monta A Co., of Cognie, to a reliculous atti-time to say, for this sull jet is learly begun, but has been going the rounds in this hear it is best to leave each person to test it for end avoras much to show that the viney aschanself. It is easily but. Any one can of France are almost destroyed, and her statem uts in the article are so glaring y untrue that it is difficult to believe that s transparent a tissue of his can be nothing In other to confute It, nothing in it is crossary than a glabor at the report of M. Tisserand, the Commissioner of ceri cultur, laid before the Phys's ration. mission on the 17th alt.

> The report states that the while namel in of departments in which play over the hern ascertained to exist up to the lean ming of 1888 is 60.

There are still in France 1944, 50 h tares 4 800,375 acres of product vivin yards, the largest area possessed by a country in the world. The Const. st h

. These figures make a perior to also the neabsolent reports that some perfor a mason casy to companie al, at culating abroad and that to are the produce the impression that correct value far amost annihilated and the tackers the more wine to export that an arrange To remove fruit stains, rub with whiskey to Bagoindy, of thamping to the Green's Initia ways exist and not have

the generius wines that are one of the promised for production, and that we to weather the preserving.

We have eres your or retons given the 200 s. f. th. production of France, and position has no man no rely to show the y if the statuents of the article of s sp. 7. The production of wine in 1887 was 7/2 (no over America)

erry that can't recompels as to as they are rise to much of this

011335

Species of the property of quality of Section is County for object outure, the To years Every hortnealbut d paper, and in fact almost every paper, has had so much to say about olives of late. that it so mish most suparfluors to add very much to what has already been said upon this sol to That there has been an iner as I planting of this trees is evident ir to the real rise of nursery in mand others who have trees fired . On a recent visit to the Quite Ouve or hard we found the wakmen packing up many barrels of cuttings for shipment to some distant point. In the face of all this the price of olive oil , es on mercastig, and people grow more and more to love the pickled olive, thus making the prospects of prefit in olive alture more and more bright.

There is much land in Santa Clara County better adapted to obve culture than mything else, unless it be grapes, and there is plenty of land for both. So these who to thinking of planting olives we would remaining as the results of our observations, planting 33 foot apart each way, and and at the same time planting grapes S , feet apart with such vicanci s as are repared where the trees come. Crops will be either I from them in three years, and it call b from six to ten years before the haves really pay, and still longer before they will need the whole space. Peach tr is mught be planted 16%, feet apart, and these will give a crop usually at two years, and extry y ar afterwisds, and the peach track can be removed as son as the olive trees to vi them any. Nearly as many park somb ansel as ther could be if that were no olives and the peach trees point d 20 feet apart, the usual distance, Las clive nods good catty atom and close att non toke pot free from scale, but it vill pay as well as anything that can be

Vii Alphabet of Jewels

fire in the market = 1 - 1, ther ar tw a phabets, trinspirent and he for opaque it the latter of wilks tarquoise, a digayy harfly come under the figures the dehalf of transto our as anothest, beryl chyracdice of, chorald, te spar, garnet, art. Oh rest, kydat, mercemconat, a bus nameras, synt sapwick pal, note it copal, pyrop-177 July, supplier, topaz, aranite, visa

vend a species of garnet, water-sappling It is perhaps not generally known that a or it by is of more value than a " relancal Litage Get rolly of the sires Rissol, asua will be off-rel ten times the produce of the framework of the said



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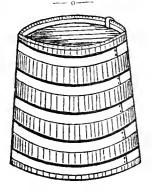
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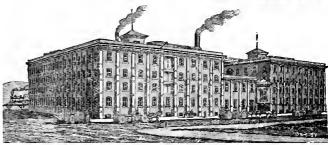
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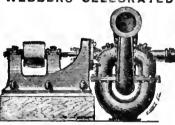
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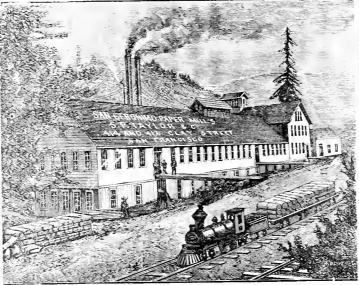
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SAN FRANCISCO, APRIL 27, 1888.

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THE MIDDAY TRAP.

STATE A SPECIAL FIRM FOR MIDITAL

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semi-sphere. Now cover the whole with gauze, which may be sewed on like the parts to a cover of a base hall, attached by means of a string.

Make a second semi-sphere similar in every respect to the first, and such that the two when brought together, form a complete sphere.

The circle of the first semi-sphere may be provided with a notch to accommodate the body or trunk of the vine, thereby enabling the operator to completly cover the plant and provided against the escape of the hoppers.

Care should be taken in forming the notch to see that it is so placed in relation to the handle as to enable the operator to stand partly over the vine when bringing the trap together.

The gauze of this trap, if rubbed over with a cloth or swab, saturated with kerosene will retrain enough to kill immediately the hoppers alighting the reon, experience has proven, however, that after a little exposure the kerosene loses its greatest effectiveness and the hoppers are therefore enabled to take a second jump and assisted by falling may escape through the opening or joint below. To obviate this and avoid the necessity of replenishing the kerosene so often a piece of flannel or similar cloth should be drawn tightly and sewn over the bottom part of each semi-sphere, the edges turning neward into the trap as it appears when closed, so that any of the victims tumbling down will lodge between it and the gauze where the density of the oil will end their endeavors to escape.

ANOTHER AND BETTER FORM OF TRAP.

I find that for different vines, different shapes are preferred. The following described appliance is the best and most commonly used at the time of this writing, though somewhat more expensive than the first named.

Frame two semi-cylinders, using for this purpose iron band 18 inch thick and 12 inch wide, which should be joined with rivets at the corners. These parts should be hinged together with small butts, which may be riveted to the frame, such that when covered with green gauze it may be opened and closed over the vines. This trap needs no top, but should be provided with a bottom of either heavy cloth or what is better still, two semi-circular tin pans about 11% inches deep, and so formed that in coming together to form the circle, a space is left for the stump of the vine and stake, say eight inches long and three inches wide. A cloth or sponge should project from the edges of the bole to close completely about the vine when in use.

For vineyards under ten years old and some even older, eighteen inches is a sufficient diameter for the cylinder, which should be about 21, feet high to accommodate long primed varieties. The last dimension may, however, be modified to accommodate the shape of particular vines. A portion of the upper part of the frame left free will serve as handles or these may be added if desired, in which case they should be attached near the upper center of each semi-cylinder.

TO OPERATE.

Smear the gauze over with ordinary kerosene oil, to which a small amount of crude petrolem may be added if convenient, as this will serve to thicken it and render it more lasting. The oil applied by means of a brush or cloth as often as seems necessary.

The operator now approaches each vine

the spherical trap or disturbing it above if green or London purple mixed at the rate are sluggish. the cylinder is employed which causes the hoppers to fly off, and, encountering the gauze, comes in contact with the keroseue which kills their immediately, or causes them to drap to the bottom where a second contact with the oil, leaves them unable to move. The trap should be retained about the vine for a moment to insure the destruction of all the victims before again opening it for their escape.

In our work, after making the parts according to the above description, and operating on a few vines, the green gauze was changed to a yellowish bue by the myriads of insects captured.

Either apparatus is light and easily handled,-they should not weigh over five pounds each.

With one appliance a man should get over several acres per day, and the total cost of treatment, including oil used, should not exceed much, 50 cents per acre.

To use the trap with best success, it should be employed at the present season. With the increase of foliage and enlargement of the vine, the trap must also be enlarged, becoming more cumbersome and more difficult to wield, though equally effective.

Very windy weather should be avoided for this work as many retreat into the ground at such a time, and the few remaining on the leaves are disturbed with great difficulty at such times.

When the air is still, or but little wind is blowing, and when the warm sunshine has removed the dew from the foliage,- then the most favorable period for general success.

A great advantage in early senson work accrues from the destruction of the insects previous to the time of laying their eggs, thereby lessening the chance of damage.

Vines laying on the ground, like those pruned on the Chaintre system, or those tied to wires, would require a semi-cylindrical screen lined with cloth on the bottom, which latter should be turned up to prevent their tumbling off, the screen being so formed as to cover the foliage. Extermination in this case would prove more difficult, as we have no means of catching those which drop on the ground But by operating in the heat of the day, and when a slight breeze would take them on to the screen, the insect will fly to it and be completely entrapped by the oil which has been placed on the gauze and cloth.

Before closing this treatise, I desire to express particular acknowledgment to Mr. J. P. Smith of the Olivina vineyard, and to his toreman, for their kind assistance and interest in the experiments which have been conducted at Mr. Smith's place. To successfully accomplish our work has required no small degree of patience on their part, and I have to thank them for it and for their advice in devising the different means tried

The hoppers have increased on the Olivina vineyard during the past three years to such an extent as to become alarming. Many leaves already put forth are withered by their attacks, and some other sections report a similar condition of affairs.

It is now my b lief that prompt and enercetic attention to the above detailed method will remove all fear of damage to the grape.

In the past two years the Commission has experimented with and provided ample remedies for all insects consuming directly the foliage of the plant. The arsenic and cautiously and enclosing it in the trap, bran remedy enables us to meet the grass- seet appears before the fruit is large, gallons of wine to the acre."

of 1 pound to 160 gallons of water will destroy other foliage-consuming insects, and has been proved innocuous to the truit, vine or raisin. The scribe, the flea-beetle, and other insects may likewise be trapped by the above described apparatus.

Up to this time the vine-hopper has proved a constant menace to the grower, but from this it is to be hoped dates our victory in the field.

J. H. WHEELER,

Chief Executive Viticultural Officer.

INSECTCIDES.

Remedies Suggested by the State Inspector.

The following condensation contains all the important features of a bulletin, which has lately been issued by the State Board of Horticulture.

CODLIN MOTH.

The remedies are Paris Green, London Purple and white arsenic. Of thes Pari Green seems the best, and the least hable to injure foliage, Use one pound to 180 gallons of water; use nothing but the Paris Green and water, stir it well and strain befor using. Spray early apples and pearonly once just as they are coming out of bloom. For later apples and pears spray again in ten days (or two weeks) with 200 gallons to the pound. Use Cyclone, Crafton, or Imperial Nozzel,

SULPHIDE OF SODA AND WHALE OIL SOAP Are recommended for trial for a third spraying a month after the second. To prepare this see farther on in this article. One spraying of Paris Green is generally enough, but when there are infested orchards around, it is safer to give a full course of treatment.

POISON

All arsenie mixtures are poison. Look out for stock, and for cuts and wounds on your hands. No great danger otherwise,

BANDS.

Continue to use bands a foot from the ground, examining every week and also put rags in the crotches of large trees.

WOOLY APRIS AND PLUM APRIS.

To kill these above ground use:

Rosin, 4 pounds.

Sal Soda, 3 pounds.

Water enough to make 41 gallons.

Dissolve soda in a few pints of water, add the rosin, heat till this is dissolved, then add the rest of the water. Use 11, pints of this strong solution to a gallon of water, and use it heated to 100 degrees Fahren-

RED SPIDER.

Spider's eggs are hard to kill without hurting the trees, but sulphur washes, applied in summer, will keep them down. If spiders are plenty and weather hot and dry, one application will not be enough. Try the sulphide of soda wash, as for scale insects. Also try the following: Take the $4\tau_2$ gallons sal soda and rosin solution as prepared for spider, add 50 gallons of water and 114 pounds sulphur dissolved in a pound of lye. Spray this on and dust the trees over with sulphur, using a beliows as soon as possible after the spray is on. Select a calm day. This will last a long time.

Spray with kerosene emulsion if the in-

bend in a circle outward; this forms a kicks the stump of the vine below if using hopper plague successfully, and Paris Spray early in the morning while the bugs

Kerosene, 2 gallons.

Common or whale oil soap, 1 pound. Water, 1 gallou.

Heat the soap and water, boiling hot, and add to it the kerosene, and churn it with a force pump and spray nozzle for ten minutes. The emulsion, if perfect, will form a perfect cream which thickens on cooling, and adhers without oilness to surface of glass. Dilute one gallon of this with nine gallons of hot water, and use as a spray.

After the fruit gets larger drive them out of the orchard by fumigation. Try a fire with a little wood tar in it.

STRIPED SQASH BUG.

A pail of water, a tablespoon of saltperer, A pint of this around every hill of squashes or melons.

SCALE INSECTS.

The auspicious time to treat these is when the uniquity of the insects are hatchol. Watch for this time. Look out for he first brood of Aspidiotus perniciosus then the chemies are turning color.

As a general useful wash the sulphide of oda or sulphide of potash, with whale oil, has proved satisfactory.

11% pounds of sulphur.

1 pound of concentrated lye or powdered caustic soda 4-5 pound, or caustic potash, I pound.

14 pounds of best whale oil soap (80 per cent).

55 gallous of water.

Dissolve the lye in one gallon of water, and boil the sulphur until dissolved. Dissolve the soap in the water, mix the two and boil them a short time; use at 130 degrees F. in vessel

This wash is useful not alone against young scale, but against the scab disease of pears and apples, also against leaf-eating insects, as saw fly larva and pear-slug. It will, however, be found that whenever Paris green has been used these insects have been killed.

The above wash is app'icable to stone fruits as well as to pears and apples.

RESIN SOAP.

This is recommended by Sol. Runyan, Courtland, Col., for scale insects on deciduous trees, to be sprayed on fruit.

- 10 lbs. caustic soda, 98 per cent.
- 10 lbs. potash.
- 40 lbs, tallow,
- 40 lbs, resin;
- 1. Dissolve soda and potash in 10 gallons water and put into a 50 gallou barrel.
- 2 Dissolve the tallow and resin together by heating. When dissolved add them to the soda and potash in the barrel and stir for ten minutes. Leave standing for two Lours, and then, with constant stirring fill up with water. Use next day, a pound to the gallon, warm. This is best for apples and pears.

The Anglo American Times says: "Califormia had in 1880 over 35,000 acres in vines, which had increased by last year to 132,000 acres, of which 50,000 acres were hearing. Three years hence there ought to be 100,000 acres bearing. With them the average is about four hundred gallons to the acre. Three years from now California ought to produce 40,000,000 gallons. At the low price of twenty-five cents pergallon, this means a revenue of \$10,000,000. The vineyards in France cover 9,500,000 acres, which in good years average two hundred

ADELTERATION OF WINES

From the last report of the United States Department of Agriculture

The adulteration of similar the d from a viry early little who continues where the case grows and little has in has I in an order to the fulness of its print, this cut, at the prisental cyntrophies for its 1 to α to as the knowledge and a sole some however while can bring to be droper it, and even mission thing large part tall some quality think and from the first the kind of the wine of the property of the spring that in Europe to the first of the tree on the world the source of the spring that in Europe to the first of the source of that in Europe to the acceptance of the control of In this rather ewil is particularly the addition of substances of all the substances of all the substances of all the substances of a substances of a substance of any substance of the purpose of a substance of a substance of the purpose of a substance of the s sold as twine there. To should found water a delivith the segretarist had by great rithan twis the weight of the form is and the prolife must not be first for Sale is "but in a bir

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> Fraudulent wines are frequently melof extract from raisin or dried grapes in France, and

tains usually 10 or 15 process forms at the star by eater by some the window process of recess form-stable substances, with a rysic substitutive for ignoring the graph and for increase the wight for every to thus increase the wight for every to thus increase the middle ratio of him that which masking the addition of war in the first supports vizion between of possible mentation gives resolve the form of in fig. Both Germany and France are majority mentation gives reset the direction of a Both Germany and Francisc and order q , q is the associated small quantity of anyhold of the which is the trace of subphere and which the trace of the subphere q and increases the intercenting off that such as for a way requiring a way with a χ - $\chi_{\rm col}$ - $\chi_{\rm col}$ - $\chi_{\rm col}$ - which with such constants of the color of the co which, and courses he are be defined on a solution of 1800. If spirite it will those particing of them grows of presence of anylin, a nor formattale, to mest be average at the town of the sense of anylin, a nor formattale, to mest be average at the town of the highly device tarry body formal and mest the second or 5 grades (2004) to the expension of anylin, a nor formattale, to mest be average at the town of with the presence of anylin, a nor formattale, to mest be average at the town of with the expension of the formattale, to mest be average at the town of with the expension of the formattale, the mest beautiful to the second of the sec

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content from and of the remaining to French and intest can easily the extract sizer liber in xee increase. The above two in the extract admining fractes. The recognized by their high percentage of subly the relating fifth 4.5. In Germany to all you In Germany the law and the first traducing sugar, and left-handed polarized the relation of a role to gly the is a first polarized in a natural wine is to will tell a greates in the after form utation. in a natural wine is too 1 of 1 for grains in the after formentation.

Done, and after side, across the mount of The plaster of the wines, which is also being 100 parts by weight to the first in some ones. free fix Lands admired as firther from very extensively carried in in France, one of the year out the magnitude of the latter left sists in adding to the wine or must, a large Wines going at verth in exemption of the first array of the carried singular and the latter left sists in adding to the wine or must, a large Wines going at verth in exemption of the first array of the carried singular a

acetate of potash, and the whole is allowed of aniline dyes, which are more readily standing of the solution must take place at as nearly as possible the same temperature. If at the end of this time any considerable precipitate has separated out, the quantitative estimation should be undertaken,

Foreign voluring matters are frequently added to rid wines, either to brighten and improve the color obtained from the grapes, or, mor-frequently, to cover up the the effects of pr vious dilution. These colors may be of vegetable origin, obtained from the various vegetable dyes, or by mixing the juice of other highly colored berries or truits with the wine; or they may be some of the numerous varieties of aniline dves obtained from coal tar . A few examples of the vegetable dyes said to be used may be mentioned as follows: Logwood. cochineal, elderbarries, whortlebarries, red cabbage, beet-root, mallow, indigo, etc.

Very elaborate and extensive schemes for the detection of these coloring matters have been devised, and chemical literature is full of articles written upon the subject, yet the positive identification of any of the vegetable coloring matters used is only very exceptionally carried out. Most of these schemes are based upon the difference in the color of the precipitates given with varions reagents, and the coloring matters of the grape resemble so very closely in their behavior others of vegetable origin, and the variations in the amount of tannin present has so great an influence upon the character of the precipitate, that definite conclusions are well nigh impossible.

The Berlin Commission rejects all methods for the detection of vegetable coloring matters as not being capable of yielding positive proof, and gives only methods for the detection of coal tar colors. The Paris Laboratory, on the other hand, gives a very elaborate scheme for the detection of both vegetable and aniline colors, designed to cover all substances likely to be used for such purposes. This scheme is based chiefly upon Gantier's and the French authorities claim that with it a chemist who is expert by long experience can detect the coloration of a wine by either vegetable or mineral foreign matters, though he may not be able in all cases to identify the particular coloring matter used. These schemes can only be referred to h re, as I consider that their value is not sufficient to justify their reproduction.

The detection of anilus coloring matters can be made with tederable certainty. The following method is essentially that given by the German Commission, and originally devised, I b lieve, by K orig. Two samples of 100cc, each of win- are taken, and shaken up with about 30cc, of other, after one has been rendered alkaline by the addition of 5cc, of ammonia. After separation has taken place, about 20cc, of the clear etherial solution from each test are poured off (not filtered) and evaporated spontaneously in porcelain dishes in which are placed threads of pur white wool, about 5cm, in length. With wines which are free from aniline colors, the wool, with the residue of ammoniacal solution remains of a perfectly white color, and the thread in the solution which was not treated with ammonia will be of a brownish color. The presence of fuchsine is readily detected, however; for out of a perfectly colorless ammoniacal other solution a bright red will appear as it evaporates, and becomes fixed

to stand twelve hours. The shaking and taken up by ether from acid solutions than from alkaline will be detected by the red coloring of the wool in the other from the sample which received no addition of ammonia. The coloring matter may also be extracted by means of amyl alcohol, which will be descharged from the solvent by ammonia if the ambin, dye used be of an acid nature, in which case the anivi alcohol will dissolve little coloring matter from the winin the presence of ammonia.

The diseases of wine may be considered in the light of adulteration, as it is a fraud to offer wines for the sale as pure wines which have under gone a change which alters their composition and renders them unfit for use. The researches of Pasteur on fermentations has shown that nearly all of the diseases of wine are due to the development in them of microscopical vegetable growths, whose germs are carried in the air. Each disease has its own special organism peculiar to itself, which may be detected by a microscope. These different organisms produce the soming, molding, bittering, cloudiness, blackening, etc., of wine. The best wines are said to be the most subject to these alterations; every year large quantities of the finest wines of Burgundy are spoiled by the disease called bittering (l'amer).

In the wines that have become entirely unfit for use through the development of one of the diseas s the fact is rendered sufficiently evident by the senses, especially to an expert taster. To detect the first beginning of such alteration, however, is more readily done by means of the microscope in the hands of an expert.

HOW TO DRINK WINE?

The Santa + lara Valley publishes the following interesting article from the pen of an Eastern contributor:

Few customs of other nations differ more from ours than those in the manner of taking wine, and, in a tess degree, those of cating and drinking generally.

Accustomed as we were to see the Vunkee bolt his drinks and even his food, something like a "piker," it was, later in life, as the Germans began to multiply among us, a surprise to learn how much enjoyment they extracted from their frugal mug of beer sipped slowly and spiced with cheerful conversation.

Extending our observation to other people, we notice that the Englishman delights in quantity, although it is taken in less haste than by the American.

The difference in the climate doubtless has much to do in shaping the peculiarities of nations. When we come to study the habits of the Latin races, notably the French, we Yankees begin to ask ourselves some anestions.

They have cultivated their tastes for centuries, and hence we are not surprised to find those tustes often exquisite in deliency; and that their customs have been greatly modified by that refinement.

On account of the favorableness of their climate, the people in Southern Europe live much in the open air—as you Californians are enabled to do-where they, in a social way, sip their beverages without "treating," and beside the little nothings that are talked at American "teas," discuss topics pertaining to politics, art and literature.

Perhaps an example will best illustrate

About two hours before the time of taking upon the wooden thread. Those varieties the solid meal of the day, two young Paris-

ians went to a café and gave their orders. The menn was to consist of a few courses only-soup, fish, game, meats, dessert, wine and black coffee. During the interim they strolled into the garden of the Tuileries. and whetted their appetites by discoursing about table delicacies. When the appointed time had arrived, they were in a condition to enjoy what they had been in preparation

After they had deliberately seated themsolves, each bowed and pledged the other in about a teaspoonful of Santerne, holding it apparently in the mouth for a few seconds, and swallowing it drop by drop so as to reap the full benefit of the delicious draught.

Now that is the way to take wine. Try it. Roll a thimble full of the finest brands of your California Muscatel or Zinfaudel slowly back to the palate and hold it there a moment, so that the aroma may ascend into the olfactories; let a few secred droptrickle down the throat, and inhale the vapor, as a sweet incense to a refined taste It will tingle in every fiber, and make you at peace with all the world. Try it, and know of a truth that a teaspoonful taken in this way gives more real satisfaction than glassful taken us a "wash-down," You will learn furthermore, that sensible wine drinking will never and in a debauch.

But of that dinner. They are almost as deliberately as they drank, never swallowing a morsel apparently so long as it ministered to gustatory pleasure; and so far as an observer could note, no topics were discussed which might divert the mind from a full participation in that pleasure. They did not eat much but they ate well-they drank little but they drank well.

That dinner, as all dinners should be, was an event of the day, and when they arose from the table they had dired in the highest sense of that term,

Now, while the Yankee looking on, despised the useless lives that those young Parisians apparently led, that object lesson was invaluable to him, and he writes of it here as a hint to those who would know how to get the most out of a dinner.

Undepraved tastes were given for gratification. Let us then "eat, drink and be infected branch is examined in May or merry," with due moderation.

The Greeks and Romans diluted their wines, stirring in from one third to one half the quantity of water before serving.

For several persons at one table this was performed in a crater, a dish something like a punch bowl, and the rim was often edged with a chaplet of laurel; and in the south of Europe, the people, both native and foreign, now dilute their wines, the ladies generally using more water than wine.

Wine-drinking is an old custom dating from the time of Noah, and emigrants from the East carried the vine with them into all the countries of their adoption,

About 600 B. C., a colony of Ionians from Asia Minor settled at Marseilles in the south of France, and taught the Gauls vine dressing; and now you Californians are contending with the world for the palm, and comparing the vine growing districts and their products in the Old World, with those of the Eureka State, I believe you are to win

The "coming man" is destined to drink wine- a small quantity only and that at his meals-and the country that shall produce it pure, and preserve its aroma born only of a genial soil, of warm breezes, of sunshine and showers, will be his purveyor.

Subscribe for THE MERCHANT.

PLANT THE OLIVE

Those who are yet in doubt, says the San Jose Herald, as to the kind of trees toplant, or who have been unable to obtain just the variety they want, could do no better than to plant olives. The tree flourishes with very little care, and will live and bear abundantly for centuries. It is always in full foliage, and is one of the handsomeest and brightest trees that can be cultivated. And it will grow almost anywhere, though the best results would probably be obtained from this deep, rich, loose soil on. the western side of the valley. Then, too, the market for pure olive oil is rapidly ex tending, and the production has never yet been equal to the demand. Of late years, cotton-seed, peannt and lard oil have been -xtensively used either to adulterate olive oil, or as a substitute for it altogether, This shows that the market is not half snpplied, and if pure clive oil could be furnished in abundance there can be no doubt that it would generally take the place of ard, and butter, especially for culinary purposes. And for building up waste tismes, and preventing or eming various liseases, it is far better than cod liver oil, or any of the nauseons substances that ere now prescribed by physicians. There s, therefore, not merely the present donand to be supplied, but one that will rapidly increase as the good qualities of he article become better known. By all means then let us plant olives. Fill up the waste places with them. Plant them as ornaments in the corners of lots, along the roadsides, and in every place that a tree can grow. In a few years they will bear abundantly, and yield a handsome profit, besides being an ornament to the premises and to the whole valley. --

A DESTRICTIVE FUNGUS.

Prof. Prentiss told the Western New York Horticultural Society recently that the black knot on plum trees, it is now well established, is caused by a fungus, the native habitat of which seems to be some of our wild cherry trees. It is not known across the Atlantic. If a recently June with a small magnifying glass, the filaments can be seen. These are threads which bear spores, and the latter fall off, and perhaps produce black knot ds where. After a while the black crust forms, the filaments are growing and enlarging, until they appear to be one whole body. Elongated sacks grow into the inside, and these contain another form of spores, which continue to develop and ripen during winter, and are mature perhaps in middle of January. They fall out through an opening of the crust, and when they lodge in a favorable position, will germinate and produce new knots. Part of the structure grows within the branch, even under the bark, and kills it. Whenever and wherever the disease appears, the infected parts should at once be cut off and burned. Look out for infected wild cherries in the vicinity, There is hardly any danger from infection by the use of knife, as the disease is not in the juice. No remedy is known, except the knife. Always cut at least two or three inches below the diseased portion, or a new knot may form below the old one without spores.

THE LATE SALE of 60,000 gallons of wine at 34 cents per gallon was made by Major J. H. Drummond of Glen Ellen. The firm of Arpad Haraszthy & Co. was the burchaser

TREATMENT OF THE VINE DIRING in chalky soils -so hard that the after VEGI CATION

Viticulture has kept fally up step for step with the universal progress of this lit ter day civilization, however among the new ideas which have resulted from the experience of years, a glance back at the theoretic cal basis on which many of them are grounded, may be refreshing. At this sonson of the year the careful grower devotes his special attention to the treatment of the vine during vegetation. This subject is given considerable space by Thudichum and Dupte, in their exhaustive treatise on wine.

Here it is said: The general rule for the conduct of the sineyard during this period must be not to suffer any useless vegetation on the soil of the vineyard, and not to allow any excessivgrowth on the vine itself. The absolute cleanness of the soil from the first period of vegetation to the end of it, as regards either weeds or subsidiary crops, is one of the first conditions of the success of the vinc. It this respect, as well as in others, small viticulturists frequently commit the greatest faults. They plant or allow subsidiary growths between the vines, and thereby destroy more of the quality of their wine than they gain by these products. The soil of the vineyard must be weeded by the hand. and for that purpose the weeders should be supplied with a small fork by which they can loosen an inch or two of the soil to extract the roots of the weeds. If there are no weeds, the mere digging up of the land in a superficial manner is sometimes advautageous to admit air and warmth, especially after many rains have rather beaten down the soil. The stirring of the surface must be avoided during the time of drought, as it would then in arease the evaporation and possibly injure the vine. In countries, however, with a wet subsoil, the frequent and even deep stirring of the top soil is most beneficial. Thus, in the Palus of the Gronde, all the weeding can be done by the plough, while in the upper Douro it has to be cautiously done with the mattock, and at Rudesheim with the hand and a small fork. In parts where the soil dries out, such as steep slopes, it is, on the contrary, advantageous to maintain the moisture of the soil by compressing it, laying slabs of stone upon it, and keeping all the paths covered by turf. The necessity of removing useless branches from the vine is absolute, inasmuch as their presence provents the son from striking the soil and the useful parts of the vine. They keep up a coolness and moisture, and thereby retard the general progress of the plant. How weeds and uscless branches may combine to destroy the finest climatic advantages we have fully described in connection with the vineyards of Croatia. The French have plenty of similar vineyards, among them those of the Touranie, where old and venerable vines are covered by a luxurum growth of branches which fall in heavy bushes to the ground, and where the adhesion of the rods to each other by means of tenduls makes the vineyards imperetrable thickets. The time for all these operations must of course be selected. We ding ought not to be done when the ground is wet, so as to hang to the instruments and the feet, nor when the soil is too dry, so that the weeds are torn off rather than drawn out together with their the workmen are re-admitted to it, for when earth adheres to the feet and tools it in such a manner that the new rods can is thereby made in many cases—particularly easily fix themselves to it and rise by it. [maturity of the grap should not be com-

vegetation is impaired. During frost, whether strong or feeble, the vineyard ought not to be dug round, or treated with the mattock, or heed. In spring, as long as there is hour frost in the morning, no cultivation of the soil ought to be undertaken. even for some hours after the frost has been melted by the sun. If the earth of a vineyard be interferred with at the improper time, so much cold may be admitted into the pores of the earth that the vines may become subject to spring frests, which would not have happened if they had had their proper protection in the earth. In a similar manner the earth must not be opened while there is snow or hail, or while there are fogs which deposit ice. All these proceedings, if taken at the improper time, would have a lasting injurious action upon the vine. In respect to all the operations performed on the vine in the vineyard, the attentionist must select, as every good gardener must, his proper day and hour The punching of fruit-branches and laterals should be done at the time, when the sun is not too burning - therefore under a covered sky, and if possible at a time when rain is approaching, so that the sudden deprivation if many leaves may not leave the plant in somewhat defenceless and sometimes drooping state.

SUPPORT AND PROTECTION OF THE VINE.

The rods of the vine require a support. Without this they would mostly lie on the ground, forming an impenetrable thicket. and their fruit would be contaminated by the mud. Moreover, they would very frequently break off, and the loss of organs thus engendered would seriously interfere with the progress of the vine. All careful viticulturists, therefore, fix their vines to stakes, the one-year wood immediately after the entting, and the fresh growth as soon as it has attained proportions fit for the operation. In most parts of France and Germany, each vine is fixed to a single stake. This seems to be the most faulty method of all, for here all the branches at a certain height above the ground are tied together into one thick mass, into which neither air nor light can penetrate, and which is there fore, physiologically speaking, dead. In other parts for example at Chablis and Wurzburg -a single vine is mostly provided with from three to five stakes, to each of which a branch of the vine is tied. We shall relate how at Wurzburg the four stakes were at one time standing irregularly, and were afterwards put into line. In Chablis and on the Upper Moselle the line has, however, not yet been established. According to the method proposed by Guyot, ten thousand vines are planted on the hectare, and these receive 20,000 stakes. Of these ten thousand are short stakes, of half a metro to 3-5 of a metre in length. They are sunk into the earth from 15 to 25 cen-I timetres in a line with the vines, and at a distance of one metre from each other. This small stake, which is called in the Médoc carasson, serves to attach the fruitoranch at a distance of 10 or 12 centimetres from the soil, and to carry somewhat higher than the front-branch, at a place which is about 30 or 35 centimetres from the soil, either a lath of wood, or a galvanixed from wire twined around a groove cut in the upper end. This lath, or iron wire, serves for fixing the pinched fruit-branches roots. After abundant rams the vineyard to it. The 10,000 long stakes are from must always be allowed to dry first before 1 2 10 to 1 3 10 of a metre in length. They are inserted close to the trunk of the vine,

This mode of applying stakes to vites = jet to the vite all the true to taching in the soil, 600 kilos at 10 continues, against it in on a confer in 3 to 40. profits in money.

NECESSITY OF PROIESTIES THE VINE ASSAUST EARLY ERISES SPRING RAINS, AND HALL, Guyot was the first to apply on a larg

scale measures for the preservation of the vine in op a vineyar is. He proved incontest dily their efficacy, and was rewarded by great success; but he clearly saw and toretold that it would'r quire the utmost courage and the utmost intellig acc on the part. of vincultures a to assent to curve ut so large a proposition. To protect the vines of a single acre of land, it is necessary to spread over them a length of 40 kilometres of straw matting. The more proposition may appear chine real to viticulturists; but it has long gone out of the range of propositions, and become a matter of establish d practice. The worst accelents of the vinin all countries are spring frests, which destroy the fructiferous shoots; secondly, the persevering and cold rains of June, which prevent the fecundation of the flowers and make the bunches fall off, thirdly, the autumn frosts, which cause the leaves to fall, or to die and g t brown, and prevent the ultimate perfection of the grape, and, last, the rains of autumn, which cause the fruit to get rett n. Had is not so common an accident as those we have above mentioned, and has at least one advantage namely, that it can be insured against, while no one would think of giving a policy of insurance for any of the other accidents. No expenditure will off of the purpose herindicated which does not rise up to it bust 500 francs per hectare, for an insufficient protection which would allow of recident in any one year would not repay the expenses. but if the expenditure here in heat-1 le made, and a viney indivible in an avera-30 hectolities of wine to the hectore, then the means of protection above indicated will certainly ruise the sprantity of wine to 60 hectolities. The effect of the protection is an increase of 30 horiditys of win , and it is therefore noe ssary that this 30 her tolitres shall under all circumstances passes a value of more than 500 frames. However the application of this north. Lis not advis. I in places where the average value of the bectolitre of wine is only so from orless The method also prosuppes a that the vinyard be plant d with the vines, and that these vines be planted in hims, on low trunks, and with small and lires stakes The protection is afterful by stray mats These straw mats have a with of the m timetres, and in heldly in patternal to twin, or with throat vilde in a wire. It y can be rolled like cany is. They are put in on the 1st of April, and not taken away until the 1st of Nov mbor, or 1st raif the whoch as the natural parties of the maturity of the grape should not be complete, and rail

much more common than that which is described to all we after the properties used in the Bourgogue and the Champage of a Lily Gay (1.1). The many will be only requires 300 bottes of stakes for the of earth the corrupt of Lily. The line hectare, while the other methods require stak is put about 20 c mm; tris in front of find bottes; but it also requires 10,500 me, the trink of the vine, including liptor of tres of non-wire. No. 14 gaing. This work is stuck into the lattic earth-wall and weighs, with the new soary surplus for at- hy 1 against the more stale so is to rise a kilo, whereby the expense of stakes and. This small present weakseries is the rafter wires comes to 300 francs per hictory. Of for carying the strew real. As the stakes course those who practis, what is called stortate distance from metric the striw ordinary cultivation, that is, cultivation muts ir sapport 1 at the solistim saby the such as is usual in their districts without wood mention 1: and in order that they reference to particular theories or scientific, shall not be salpet to being hited off by principles, will be likely to adhere to old the wind, they are nod steach is iin stake practices; but those who will be equible and, by means of a little lat of iron wire. It is willing to comprehend all the advantages increasing to expose the vin underneath connected with these new systems of treat. These straw made towards the seast and ment will readily be able to calculate their south, very little only towards the west, not at all towards the north. The protection towards the north must labs but -that igainst the west marry absolute, for it is from these directions that the most dangerous encines of the vine, the rains and the cold winds-approach. The protection from frost is giv a by shutting out the sky everle of and preventing reduction towards it. The vine now begins to grow vigorously, In its protected needs the warmth is caught, and it springs out exub rantly.

SENSIBLE ADVICE.

The International Company that is working up the immigration to Baja California have had their plans checked, through various causes, but they still keep to work, though with indifferent success. Their titest seleme is the report that the mountains we full of gold, that is to be picked up with as much toribity as in the carry days of California history in 'P'. There may be gold there, but to these going to get if the Pasadena Usion gives the following

1. Stay at hone

2. If you are determined to go don't g unless you have ample means to go to Sin Diego, and there to purchase a complete mtht. A t am and wagon, mining tools and provisions enough to take you there and back again, also plerty of bedding,

t. Don't expect to get rich in a day, nor two days don't expect to get rich at all, and you won't be heappointed

4. Recallect there is little or no water in that country and you had better take some along. You can't work a placer mine t profit with oit water.

5. The population of a mining town is cways much up at first et a hard lot of citizens, and cinim's if and money, if h has any, are not too safe

is San Quintin is not it, the United States and you may anticipals aroulds with the government, particularly if you "strik

The mines are distart from San Diegoly was derived about 250 miles. It will take Sin Dr. of and year will be long by sit of which the prospect is not in maging to me who will book

Many got Sin Quitte y lad and

The visit has frenche and everyther else he can that emitty. The visit is visit says mades during to the control of the

It at bein charry to study to

SOUTH AUSERALIA

The first annual meeting of this Association was held at Adelaide on March 2d. After discussing the very favorable condition of the industry in the Colonies, and the marked improvement in the estimation in which the local product was held, Mr. Thomas Hardy, so well known to our Calif amia vine vardists and wine-makers, made the following address in which he sketched the growth of the industry in the Colonies. Mr. Hardy said, it was n arly twenty years ago since he started a similar Society among the vine growers, which was named "Vignerous' Club," and consisted of about twenty members, comprising nearly all the leading vine growers of that time. The first President was the late Mr. John Reynell, who was the father of wine growing in this colony, he having been the first man to introduce wine-grapes and cultivate them for wine making at his vineyard at Reynella. That Society was in existence for about ten years when it died for want of more active support. He trusted the Society now formed would be better supported. and thought the founders of it had done wisely in making the annual subscription almost nominal. If the Society was to do any good politically it should have a large tell of members, and he hoped to see all the vine growers of the colony and their sons and head cellarmen join it, so that all interested might have an opportunity at the quarterly meetings to discuss any matter for the forwarding of the wine industry. There was no lack of subjects which might be profitably brought before the members for their consideration. Politically the Society might have many things to discuss and act upon, foremost and most important being the free enterchange of the products of the seil among all the colonies of Australia. That would very greatly benefit the wine and fruitgrowing industry of this colony by opening up markets near by for our wines, dried and canned fruits, jams etc. At the last general election of members for the Legislature this important matter was scarcely adverted to, at the same time the use of the totalizator was made one of the test questions put to the candidates at almost every meeting of the electors. The Society onaht to be able to bring such questions as that or any other prominently before the country at the proper time. There were several other matters requiring immediate attention, among them being the necessity of doing something effective to abate the destruction of fruit by the sparrows, which at present bid fair to put an end to grape growing altogether. Action should also be taken to induce the vine growers of New South Wales to insist that the vineyards infected by phylloxera at Camden should be immediately uprooted. The persistent neglect of that by the Government of New South Wales was fraught with the utmost danger to all the vine growers in Australia. The aid which might be given by our Government to vine growing by the introduction of skilled vignerous from Europe might well be considered. Practically there was no end to the various topies which might be brought before this Society. One of the great st charms in vine growing and wine making lay in the fact that there was always something to learn, and although he had been a vine grower since 1853, he was still a learner, and had always some experiments in hand and notions to prove or disprove.

Among the most important topics for

VINL GROWERS' ASSOCIATION OF future consideration and discussion was the adaptibility of different soils and chmates to various kinds of vines, and to the style of wine desired. There was still much to learn on the subject, and a great deal might be gathered from the experience of this and the other vine growing colonies Then the study of wines suited to the English and other markets, and where and how they were to be produced in large quantities was a most important one at the present time. The best methods of fermentation, the effect of long and short fermentation of red wines, the kind of buildings best saited to ensure regular temperature during wine making, the kinds of timber suitable for vats and casks, the preparation of casks for the shipment of wine, the sizelof casks best suited for shipment of Australian wines, the pruning and cultivation of the vine, the effect of keeping vineyards well worked in the quality of the wine, the effect of wide planting on the production of perfect grapes, the manuring of old vineyards, and many more equally important matters would occur to the thoughtful and earnest vigneron and the discussion of them should give a perpetual interest to the proceedings of the Society. Kindred Societies in the other colonies and Culifornia would doubtless be only too glad to reciprocate by the interchange of records of their proceedings, and the Society might obtain the best periodicals relating to the wine industry from other countries thus enlarging the sphere of knowledge of its means at a small cost. He was sure that the best thing the Society could do was to endeavor to give to the young men engaged in viticulture a lively and intelligent interest in what they were doing. By that means the character of our produce would be raised year by year, and at no distant date South Australia would be able to produce wines equal to those from many of the oldest wine countries of the world, and in quantity to meet all demands.

Mr. W. F. Snow said he had had eleven years of practical and expert experience. After some time spent in his father's counting-house in order to get an insight into English business and English tastes he went to Bordeaux, and was sixteen months with one of the cleverest blenders and best known men in that beautiful city. There he went through the mill, and learned his business from the beginning, from sulphuring a cask to pronouncing on a Chateau Lafite of 1864. He first tasted the Australian wines in 1882 at the Wine Exhibition in Bordeaux, but tasted them very careless ly, never dreaming that they would come to the front in the way that they had done since; but he remembered being struck with their intrinsic worth, although faultily made. Since then his people had had occasional enquiries for Australian wines, and attention in England was gradually drawn to them. The Colonial and Indian Exhibition was more or less a revelation, and he was by no means the only English wine merchant who saw a great future before these wines of the Southern Hemisphere. He tasted them then very carefully with some French friends, and came to the conclusion that there was good business in it. They were, himself and his friends thought, for the most part very imperfect wines and many faults about them. Still there were elements in them most valuable -elements muchly prized by wine treaters -and in his humble opinion with time and patience Australia would produce as fine wine as there was in the world.

His enquiries regarding the shipping trade with Australia were eminently unsatisfactory, and very few people knew anything about it. It appeared to have got into bad hands, and to be very much monopolized. There were many things he could not understand. For instance, on very nearly every railway station in England was an exceedingly artistic advertisement of Highercombe Australian wine. Diligent search was made for information, about this grand era d' Australie, particularly as it was found that a great deal of the wine was being sold. He fancied from the amount that it must be a big vineyard a la California, of 500 acres, and those present might judge of his surprise when he found that it was only between 20 and 30 acres. And one of ntleman was unkind enough to assert stoutly that the merchant who was doing such a roaring trade in Highercombe had not had a drop of it for seven years. Other stories he heard about bad casks, unsatisfactory consignments, etc. And the long and short of it was that he determined, being a younger son, to come out here and see for himself what business could be done, believing that he should do welt here. He had no reason to regret that determination. From what he had seen, noticed, and tasted in this province and at the late Exhibition from other colonies, he had made up his mind to go into the colonial wine trade either in South Australia, Victoria, or New South Wales, wherever he could get the best and most advantageous terms. The production of claret, he thought, was the most important study for South Australia, whose clarets contained too much alcohol and too much body, and also were characwines was the first subject which required dard which was nearly approached by some hibited in London. Of course that was a matter which required attention. It was pete successfully with the wines of other countries.

There was a splendid opening here for port, but if grape spirit were used a much better wine would be produced. The very best grape spirit ought to be grown, and he had no doubt that an excellent brandy could be produced in the colony. Our sherries were the worst of the wines, but the defects could be overcome. The Rieslings were the most perfect wines as a rule. There were indeed, most beautiful, and some of the fancy wines, such as Frontignacs, Muscats, and Alicants, were the best he had ever tasted, and ought to sell well in Anstria. The wine industry appeared to him to be treated badly by the authorities, and large sums of money had been lost in consequence of the want of knowledge. A practical instructor ought to have been brought out from France, and at the present time the services of such a person would be extremely valuable to the whole colony. He would suggest that something freshness and greenness of June, and are of the kind might be adopted in connection remarkably prolific in flowering. with the Agricultural College. Respecting casks the South Australian clarets often

showed signs of their badness. The wood which was found to be most suitable was Baltic oak. If a model vineyard were eatablished by the Government the benefits would be very great, and phylloxera-proof vines could be planted, in which the greatest interest should be taken.

FLATTERING VITICULTURAL PROSPECTS.

The San Jose Herald, commenting on the viticultural prospects in Santa Clara county says, that the promise for a magnificent grape crop on the western side of the valley, never was better. The vines are all starting well, and the earlier varieties are already literally erowded with clusters. And all through that section preparations are being made to take care of the crop on a scale never before attempted. The owners of the larger wineries will greatly increase their facilities, and the owners of the smaller vineyards are preparing to build wineries of their own. J. B. J. Portal is already ordering increased cooperage and new machinery, and extending the limits of his magnificent winery and distillery. J. P. Pierce & Son of Santa Clara, are also greatly extending their buildings and other facilities; so is Captain Merithew, D. M. Delmas and others. Among the smaller vignerons, Mr. Sutherland and Mr. Wright will both build new wineries this season and take care of their own grapes, and several others in the neighborhood will do the same. Ample preparations will therefore be made to take care of a large crop, and the vignerous will be more independent this year than ever before. This, of itself, will help to raise the price of grapes, and give increased conterized by a certain amount of harshness fidence to all engaged in the business. The which should not exist. The choice of prices of wine, taken all together, have been very satisfactory this season, but only those attention. In South Australia vinegrowers who made their own wine have been much ought to produce a light claret of a stan- benefited by the advance. The price of grapes was very low last season, and those of the wines which came from Victoria, and who purchased large quantities made almost were shown at the Exhibition, because it a fortune, but this year most of the growers could be made in this colony just as well | intend to have their share of the profits of as in Victoria. The effect of the happy-go- the industry, and are taking measures to lucky fermentation had been noticed in the that end. This will have a double effect. wines from Australia which had been ex- It will take a large quantity of grapes out of the market, and it will enable wine makers to hold their wines for satisfactory possible to regulate fermentation by prices. Last year the wineries were all machinery. If a good claret was placed filled to overflowing, and wine makers, before the public at home it would com- many of them, were compelled to sell at almost any price to relieve their overcrowded cellars; but this year ample room will be provided for even the large crop that is expected, and the vignerons will be able to hold their wine nutil reasonable prices can be obtained.

Home Måde Fertilizer.

The Horticultural Times gives the following method of making a fertilizer for pot plants:

From a blacksmith's shop I obtain the clippings of the horses' hoofs, and as they sweep the floor, some of the coal-dust and the steel or iron cinders and filings also. I fill a hail about one-fourth full of this substance and then add boiling soft water enough to make the pail full. Once a week, then, I give the plants a thorough bath, usually setting the pots for a while in the liquid. I have found this treatment most excellent; it seems to furnish a complete food, for the plants at all seasons have the

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THE OLIVE IN AUSTRALIA

The following is the lotanie did scription of the several varieties of o'tye trees now planted at the Experimental Farm, Doskie, Victoria:

Olea Europea rubra, Bern 2 105 Dahamel 77:21 Colombal coadhda.

The Red Caillet is large A little roundish, with long brittle branch's, drooping a little. Its leaves are green, close band d towards the top. Its buds bloom easily, and bears roundish-oval, if shy fruit, with a short pedicel, of a dark red, upon a greenish-white ground, which it keeps until ripe, which happens in April. Its oil is very good, Length, 0.787 inch; breadth, 0.550 inch (approximate)

Olea Europea papillata - Olive tree with top-knot.

This tree is of medium size, with straight branches. Its leaves are short, broad, far apart, oblong-oval, roundish at the end, or tapering to a short little point, being dark green above and whitish underneath, or about 2 340 inch in length, and 0 747 incl in breadth, having strong petioles. blossoms are numerous, yearly. Its fruitmiddling, smooth, roundish-oval, of s beautiful black, ending with a small top knot. They are strongly adhesive to the pedicels, which are long. Very little pulpy the stone pretty large. Its oil is sweet Length 0.585 inch; breadth 0.354 inch (approximate).

Olea Europea laurifolia.-Olive with leaves like laurel leaves. The straight and quadrangular branches of this tree distinguish it as much from others as its large and broad leaves, which are oval lanceolar. sharp, of a dark green above, about 3.543 inch in length and 1 377 meh in brendth. having strong petioles; it blossoms in small bunches, its fruit is pretty large. roundish-oval, pulpy, ending with a short blunt point; the skin is hard, dark, the the oil sweet, pretty abundant; the stone oblong, obtuse, of a medium size. Length 0.945 inch. breadth, 0.550 inch approxi mate).

Olea Enropea oblonga No. Olive trowith oblong fruit.

This variety differs from Olea Celina, be cause its fruits ripens later; its branches droop a little; its sharp elliptical leaves, of a dark green above and a greenish whiteunderneath, are of 2 459 inch in length and 0.519 inch in breadth. Its blossoms have long pedicles; its fruit is oblong, roundish, ending with a small point of a dark violet, placed alternatively in odd numbers at the top; it is very adhesive to its podicel; its pulp is thin, its oil limpid, the stone large, oblong, point d. Length, 0:589 inch breadth, 0:315 inch capproximate).

Olea Europea conditiva Olive with fruit for picking.

This tree differs from the Spanish sorts by its thick foliage, its branches drooping a good deal. Its leaves are very large, very long, of a dark green, strong, closebanded, often curved, being as much as 4.724 in length and 0.480 meh in breadth Its blossoms are often sterile, the fruit is large, oval, clong ited, it shy of a brantiful black, often deformed by insects; leaving its pedicel easily; the pulp thick and tender, containing a sweetish oil depositing a good deal of fecula. Length, 0.981 meh; breadth, $0.590~\mathrm{meh}~\mathrm{(approximate)}$

Olea Europea regains. - Royal Olive tree The Royal Olive tree bears nearly every year. Its fruit, which is pickled with chlorate of soda, is often attacked by some stomaxe kairoun; the tree is large, has

num rous branches, drooping with mid-dark green with short petroles. Its blos dling size I aves, narrow pointed, of a 'seens are small, seanty, the fruit roundish slight dark grown, pretty far apart, being of a shiny depoblack; the pusp is ar tty 3 416 to he in length and 0.472 inch in thick, the stan evally point dend the broadth. Its bloss has have short policels; it heat. Length, 0.394 in his breadth its fruits large, g in ridly single, roundish- 0.315 inch approximatoval, often on yen surface, ending with a small obtus. knot of a whitish color, then courlist rid. Nice on no ber variety of will of a deep red, g tring deep black only where ripe; the skin tirm, plenty of if sh, which is bitter, self, falle of greasy oil inferior in [top forming always a kind of hedge, with quality to that of the preceding varieties Longth, 0.914 mehr broudth, 0.669 meh. qupreximate

Olea Europea uvaria N Bun, hy olive

This tree grows very large and tall. Its branch's are drooping laberally and grow a'l outsile, so that the inside is nearly empty Its haves are pretty large pointed of a beautiful green, the buds very small grow always in bunches, only on two year dd branches, and blessom very late, front, gathered in sleepe of a bunch of grapes, and has a long poduncle. The Lyes ar large, oblong-oval, passing from group to purple red and to jet black. They ontain a bitter pulp, which produces : c very good oil. Length, 0866 inch. breadth, 0.590 inch (opproximate),

Olea polymorpha (N .- Weeping Ohy

Of all the clive trees this variety is gen rally the most cultivated by us. The tree attains 32 feet in height. Its long branches, with thick foliage drooping, distinguish it as much as its leaves, and its fruit is oblong. of a beautiful violet black full of an excellent (il, which keeps longer than the greatest part of other oils. Its crops, though alternate, are sometimes of an extraordinary abundance. Length, 0.787, breadth, 0050 inch capproximate

Olea Europea nig arima. Olive tree with black fruit.

This tree fears wither the cold of our atmosphere, nor its fruit, the noxious inseets. His trunk is pretty tall, very smooth, ash color, with straight branches, far apart. Its leaves are narrow, sharp, small, It blossoms only after the other varieties, and the fruit is middling, oblong, becomes blackish very early, and very deep black shall be met on their own ground with this when ripe. Its pulp is very black, very bitter, makes very fine oil, which keeps a long time. In spite of this, this variety is very little cultivated. Length, 0.705 meh; breadth, 0.393 inch sapproximates.

Olea Europea atro-violacea. Reddish Callet Olive tree

This olive tree presents difference enough to be separated from the other varieties. The tree is pretty large, with long branches drooping a little. Its leaves are small, ellipatical, sharp far apart, very strong, of a Table green, being 1 180 meh in bengthand 0.472 inch in breadth. Its blossoms are numerous, on long peduncles, generally fertile. Its fruit is unddling, oval-roundish, obtuse at the top, of a violet black, the skin pretty hard, the pulp very little flyshy, full of pretty good oil. The stonis large, oblong, often sharp, Longth. 0.020 meh, breadth, 0.355 meh apprexi-

Olea Europ a buxifolia. Olive tree with box leaves.

It is amore the most sterile tooks that this variety grows the most brymmantly Its trunk is often used for grafting. Its crop is int. The tro is always small shrivelbol, with short branches confuse, oval, very small, ending in a point of a lown success

There is on the most steril, high lands of folia tree with a tathens trunk, short branches straight, ending in a point at the marrow, oval, able high aves of a puls grown, whose fruit is exceedingly rare, small, eval and black. I believe it to be in ligenous t our regions.

WINE IN TRUSCE.

From La Un. - For the a fortinghtly magazine published in Paris, deveted to the viticultural paterests of France, we gather's one facts which will be of interest to California wine growers, as showing the possibility at no very distant day of this France in the much-talked-of markets of the weight.

A meeting of the viticultural section of the Agricultural Society of France was recently hald in Paris, and, among other things, r solved with almost entire unaniunty against the renewal of the commercial to aty with Italy, basing its action upon the protectionist, tendency which is becoming more marked in every country of Europe; and the atticle from which we quot proceeds to say . There is perfect ununimity in the agricultural world of France to to longer agree that agriculture the universal sacrifice, shall continue to pay the raisom of industry in commercial conventions. Under the now economic condition of affairs, we hope that agriculture will have more to gain than to lose The reason for this unanimity of sentiment regarding the treaty with Italy is found in the fact that the price of wine in Sicily and other parts of Italy has fallen from 25 or 22 francs per hectoliter to 7 and even 5 francs per hectoliter, or, by the American standard, from \$21, or 20 cents a gillon to 63, or 42, cents per gallen, and the French viticulturists will not consent that they cheap Italian wine .

As to the decrease of wine in France it was asserted at the mosting referred to that the wine-bearing area of France has diminished 1,093,627 hectares, the hectare being equivalent to 2,171 acres. With this loss flarea as a basis, the article referred to computes that the annual loss to the viticultural interests of France is 656,900 000 francs, or \$131,200,000

A strong argument from protection is found in the statement made in the macazine referred to, that the increase of the import duty on wine has cultanced the price of Treuch ware and has correspondingly lowered the price of Italian winwhich has heretofor found a market in France. It is obvious that the French be-Leve in bigislating for France, not for Italy and that the price of the home product is, in their minds, far more important than the price of the foleign product (Sulf, it will be a hard matter for France to repair the raying secure I by the physics i.e. and to restore her vine growing and wine-preducing area. It is to her mist rt no that particular, that the future of Canfornaci wine will owe its prosperity, and while we diverging, phable. His heaves are roundish tempered somewhat by the thought of our

PRENCH AINEYARDS

Variable to a report transmitted to the State D performent by Frank Mason, United States Cusul at Murscilles, France, the are s of vine yards that wall be planted to American physical revesising vines in that country this year will not full far short of (75,000 acres. At this rate of substitution, he says, the complete restoration of the vine yard of Francis a question of only a fow years. Mr. Moson stat's that, in his epanton, the vintage of 1888, so far as this restoration has already gone, will reach that of the ant-phylloxers period proceeding the Franco-German War. Evideutly Mr. Mason has not lately consulted the statistics of viticulture in the country to which he accredited, or he imagines that the moment a phylloxera proof vine is planted it commences to produce grapes. instead of going through a process of growth and grafting which consumes years. According to the figures prepared by the State's change into active competition with French Commissioners of Indirect Texas, and reproduced in the Bulletin recently from the Madibus Vinscob, the vineyard area and wine production of that country have steadily declined since 1875, the year of the greatest production. In that year the acreage was 5,550,000, and the production 1,820,000,000 gallous. Last year the acr age was 4,800,375, and the yi-Id 516,747,000 gallons. In twelve years the area of the French vineyards has fallen off marly a million acres, and the yield over a thousand gallons. During these years the demands of the French people have been met with the wines from Italy, Spain, Portugal and other countries. The statistics referred to show that in 1975 France imported \$1,787,000. In 1887, 250,585,000 gallons wire imported and 51,100,000 exported: There is no doubt but that the vineyards of France are being rapidly restored by means of the phylloxeraproof vines import I from the United States, but the end of the century will probably not see the vine production reach the figures of any of the years proceeding the ante-phyllexers period

SORGIH M FOR PORAGE

Mr. J. H. Alexander gives some very interesting facts in a letter to the Lie Stock Lorent, upon the value of sortham for for the

He says up in the thin soil of the hill country the sorghouss are invaluable, and he depends largely upon them, for grain as well as for foldler.

"I plant plenty of sweet sorghum for grown food and use it liberally from the time it shows a loud until frost, making successive patches of them. Any that is not fed green is our lim shocks, and if out up, is good food as long as it lasts. I save the word separately, and for I them in place of outsign corn to all sorts of stock.

. The new sie harms saghams, such as mile maize, yellow is the earliest and best; and Kaffir corn, and white Dhours, I plant always two or in ro kinds for grain, and for foolder. Where corn makes fifteen to twenty bashels, these make thirty to tifty bushlabsport tere The staks are green and full of vig r whiln the grown is rip ; and that is in title as with in the green's righting stalks make this of state. I never am

The writer sales or text school at the ment as to the value of wordling grain for freshing regret that I rane must suffer, our grief is by the reports of the department of agriculture, in I says that the feed question has never troubled him much since he began the use of sorghung train and forag



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Country Board Wanted.

A family in the city desiring to spend a few we ks in the country wish to bad accommodations with some private family on a farm, within easy distance of a line of railroad. Address X, this office, stating location, terms, etc.

THE SACRAMENTO Bee says: The immens ranches of Northern California, compaising from 1,000 to 40,000 acres each, and which have been a bar to progress, are gradually dwindling down to small farms, and these small farms are occupied by industrious people. This means prosperity to the whole country. Great land tracts have recently been placed upon the market in Sacramento county, and it is the boast of the Butte county papers that at least 30,000 acres are offered for sale in that county for colonization. The Bo has always advocated the cutting up of the great estates, and it is now glad to see that the plan is boing adopted.

The Anglo American Times notes that in the famous Mesilla Valley of Southern New Mexico the grape vines are now showing evidence of blossoming, and in a few weeks will be in full bloom. The fruit begins to ripen in July, and is in season until October, when the wine is made from the unshipped remnant of the crop. A five-yearold vineyard, with proper attention, should produce from 800 to 1,000 gallons of wine to the acre. A very superior quality of brandy is manufactured from the less or settlings of the wines, and the apple and peach brandy made at Mesilla is said by experts to be quite equal to the best imported French brandies.

THE THEIPP Fly Remedy, the device of Chief Executive Officer Wheeler and Commissioner West, will be tried, when the festive fly makes himself plentiful. The idea consists of a double back action hoop, with mosquito netting adjusted so as to cover the vine, and imprison the fly until the deadly frmes of some active acid take effect, which is said to be instantaneous. Vineyardists who have looked closely into the matter are much impressed with the speedy and effective operation of the new

Subscribe for the MERCHANT.

The production element at Riverside prides itself upon the assertion that wine is never seen on the table of any hotel in that town. The opposition party claim, on the other hand, that the lack of wine on the hotel tables drives away thousands of tourists from the town. There is probably considerable truth us the latter arenment. Wine to-day is a mecessity of civilization and not a luxury of life, as it used to be considered years ago, when the vineyards of the world were confined to a few hundred acres in Europe. Wine is considered the most effective safe guard against the horrors of intemp rance, by nine tenths of the thinking people of America, who have been convinced on this point after years of careful investigation. The p-tty prejudicwhich is exhibited by an intolerant party in this respect, leads to an display of a spirit so diametrically opposed to American principles, which is calculated to disgust persons seeking a home, and cause them to look around for a more liberal minded class of people among whom to cast their lot. It has yet to be proven that the water supply at this town of the immaculate is insufficient in quantity or quality to justify an edict, which from its terms is equivalent to persecution of the stranger within its gates. The name in itself has a damp and refreshing sound to people at a distance, who naturally dream of weaping willows, gargling waters, bullfrogs and miasma. The people who run a town in which a bottle of wine cannot be brought for love or money are upt, however to be peculiar on lots of points. The chances are then, that the name must be taken as a joke, meaning the river is on the other side. somewhere over the mountains. The reputation which this newly founded city is rapidly earning for itself among the ourside but enlightened nations of the world, not forgetting California in particular, would justify a change of name. Try Prytown.

THE BEET SUGAR enthusiasts need not feel alarmed at the announcement which has been just made, that the patron of the undertaking, Claus Spreckels means to b, come a resident of Philadelphia. The shepherd will not neglect his sheep in the California pastures. Their wool has not yet grown long enough for the shears. The only object of this temporary removal is the necessity of superintending the construction of the monster establishment which will be built with the honest intention of shivering the stontest timbers in the New York Trust. The haughty ciant of the Eastern metropolis has to down before our plucky little Californian, David, who goes forth to meet him with his sling and the best wishes of his fellow citizens. California can grow the beet, and sugar is in demand all over, It is therefore not at all unlikely that in the near future the agriculturists of California will yet have a clear field for the product of their farms. The market west of the Eocky Mountains will be swamped with beet sugar which will than be king. This may be expected where the Hawaiian commercial stock is worth about \$100 above par. When the Sugar King of the Pacific Coast and Islands has floated his banners over the baried hopes of the eastern schemers, and Hawaiian sugar has gutted the markets of the new world to the exclusion and rain of all foreign competitors.

Charcoal is excellent as an absorber of gases in rooms where foul gases are present, It should be freshly powdered and kept there continually.

EVERY ENDEAVOR on the part of the wine growers of this State is being made to have Governor Waterman re-appoint Arpad Haraszthy as Viticultural Commissioner at large. Mr. M. M. E-tee has declined the place. The S. F. Post voices the sentiments of the vineyardists generally when it says, they think that his displacement was a had bit of policy on the part of Governor Waterman. Mr. Haraszthy, they say, represents both the old and the new ideas that have governed grape growing in this State. His father was a pioneer wine maker, and was one who introduced the widely cultivated Zinfandel grape from Europe, Mr. Haraszthy himself is a vinevardist as well as a wine merchant. He has had the advantages of a thorough training in the best Europeau vineyards and wine cell as, and he is the only manufacturer of true champagne in California. He is not, moreover, identified with the boycotting merchants of this city, These are the reasons why the vinevardists arge his re-appointment. A delegation of gentlemen, who may be said to represent the wine and brandy producers, intend to go to Sacramento to urge the return of Mr. Haraszthy.

Bonfort's Circular of latest date contains the report that hot debates are going on in Champagne in regard to the 1887 vintage. Some merchants find them good to compound with others, while others, especially those who do not own any of them, think that they are acid and far inferior to proceding vintages,

A number of vintages among the best growths have been severely injured by frost in January. The buds are speiled on at least one half of the vines in the lower vineyards where the port wine is made. The prunings disclose a poor wood that augurs but a light crop for 1888.

From Bordeaux the report comes that the sudden ending of the fine spell has dashed the hopes which prevailed of an early start in vineyard work. The cold weather which accompanied a snow fall had, the effect of driving every body out of the vineyards.

LIKE MOST ORDINARY mortals, mathematicians are inclined to shirk dealings with figures. Even Newton, the great master of the great abstruce calculations, could not. we are told, cast up a sum in addition; and the works of M. Stas, said to have never had an equal in exactitude, have been found to contain an astonishing number of arithmetical slips. Prof. Huxley has given the weight of air on a square mile as about 590,120,971,200 pounds, containing not less than 3,081,870,106 pounds of carbonic acid, in which is 371.475 tons of carbon. The real quantities, as figured by Mr. Sydney Lupton, are 59,133,431,808 pounds of air. 31,464,899 pounds of earbonic acid, and 375,227 tons of carbon. Another writer has proven the water under a westerly equatorial current, this false result being based on an arithmetical error.

THE TREASURY circular forbidding the importation into France after April 1st of the little Spanish wines fortified with German alcohol, gave rise to an animated busi-March, and a combination of strong houses is reported to have been made for the purpose of cornering the market in these wines. which will result of course in advanced quotations almost immediately. In fact, we note already an advance of from two to disseminate information concerning the three francs the hectolitre,

AUSTRALIAN VITICULTURE,

EDITOR MERCHANT: -I have the pleasure to transmit to you herewith copies of the four published Progress Reports of the Royal Commission on Vegetables Froducts, in which you will find a large amount of information regarding viticulture in this Colony. The fifth report shall be published very shortly, and shall be duly transmitted

I conclude that you have learned by the Public Press the impetus which has been given to the cultivation of the Vine in Victoria by the labors of this Commission. I may be allowed to add that the Board of Viticulture has recently been established by the Government, and your exchanges will show you the carn st help which has been given to this n w departure by the Minister of Agriculture, the Hon, I. L. Dow.

It is in contemplation to resume, in connection with this Board, the publication of the "Vigneron" newspaper, and as the Secretary of the Board, I am now organizing matters for that purpose. It would be a very great help to us to have a complete file of the San Francisco MERCHANT, say from the commencement of the new volume. The last number which reached Melbourne is that for February 3, 1888, but I should like to have the complete set. I need not say we shall heartily reciprocate.

I am writing by this mail to Mr. C. J. Wetmore, to assure him that if he can spare time to pay us a visit at our approaching Centennial Exhibition he will have a warm welcome from the viticulturists of Victoria.

I shall not fail to let you know from time to time the work done by this Board.

Yours faithfully.

JOHN J, SHILLINGLAW.

Secretary to the Royal Commission and to Board of Viticulture for Victoria.

THE DIRECT CONVERSION of heat into electric work is a problem that continues to tax the ingenuity of electricians. What seems to be the most promising attempt at solution yet made is a new thermo-magnetic generator and motor devised by M. Menges, of the Hague. Like the recent pyro-magnetic dynamo of Edison it depends upon the fact that the magnetic metals lose their magnetic power when heated. It claims several important advantages, however the chief being that the necessary alterations of heating or cooling are given automatically, and that the cores of the armature coils are relieved from changes of tempera-

THE STATE PRINTER will soon have completed, and ready for distribution, the Annual Report of the Viticultural Commission, embodied with which will be found the sub reports of the several commissioners. An interesting feature of the publication will be a long and exhaustive report on wines and the wine industry of California by Arpad Haraszthy. In it will also be found the latest and most correct estimate of the wine and brandy crop of '87.

F. Pohndorff, besides being recommend. ed as special agent for the Wine Conference ness in Cette during the latter part of at Madrid, has been appointed an agent for California to take samples of viticultural products and to procure samples of wines, raisins, cuttings, and other European viticultural products. B. F. Clayton has also been appointed as an agent in New York to wine industry of California,

TRUE TEMPLEANCE.

The long stockings that these small firms produce the spectacle as much as possible." simply a bank deposit.

It has never been stated, that I have any knowledge of, that the French as a nation, are intemperate, and hence it is a plain and soberness has been the rule, and not the exception. I have seen it stated recently that since the destruction of so many vineyards by phyll arra, there has been more of the fiery liquors made use of thin | really conglitened country. otherwise would have been, which only goes to show that so many craving appetites must be satisfied, regardless of probabition or anything else.

GRAPE CETTINGS.

Grape cuttings, says the Progundi should now be taken from the other, or the father of California other places of storage, and burned in a dry low the surface of the ground, then put astonish von.

CIVILIZATION IN CHINA

A writer in the Vice gardist who evidently the Vice of the latent of the Common that I am not see you believes in pure wine-brandy as a check to 24th says that persons who doubt the basbelieves in pure wine-mainly as a cases of 2 may 1 state 1 th Chines plant-limits intemperance says. Let us look a stip array 1 state 1 th Chines plant-limits to be committed further into the great and over-whelming that only to walk into the city of Shongs between the 2r to 3 further into the great and over-whelming that only to walk into the city of Shongs between State 2 to 3. top of intemperance. When we come to bet a few minares task, and they will find compare the United States with other compared the most riviling of these punisherings, in that respect, we cannot help exponents in find operations, and its inflation of the color of the most riviling that we are to state the present of the color of th claiming that we are, to an approximation and and any and if yill the Chars who know if degree, a temperate people. This wish it " I hammed on Kahas chardened to which a 2 ht visit a be readily seen when we compare the reported, will have passed the greater part of the doctors of which will be venues collected in this country and have the past in vertice will be specified in this country and have the past in vertice will be specified. venues collected in this country and Euge the part in years in pul. The specific land from the consumption of int xeating of the for which holds been punished liquors. England with a population less was also blackmailing the new prison rethan balf the amount we have in this count who were just in just with him. Howard people if Cauff in w. w. try, receives double the amount of revenue suspended in a case about the feet hall, from the above source. With the every each hash adding ugh the top in a weeken tion of the nations where vincy also prefer are somethic could not reach it with dominate, intemperance is far was then his hands. His feet which were leaded in England. It will be interesting to refer with chains, were so far from the bottom briefly to France. Now, it is a significant, that how all lonly post touch it when stands fact that but few of the French people sug on up the. Here he was condemned come to this country, and why: Samply to stand, without fold reward, just insidbecause the masses have their into strips the outer get of the Magistrate's yameno, of farms and their vineyards, paid for the sport for hundreds, until death put an conturies ago, and they are their hones, and this sufferings. The writer suggests and which they manage with all the energy that a phot graph of the case and its fact in regard to the conand frugality they can must r. making for occupant would be a telling frontispice-tothem a peaceful home, and a r assemble the Marquis Tseng's recent article on the amount of comfort. The young is not as "Awakening of China". The exhibition not forced into the army when they become 'is supposed to act is a determinate practiof age, as in Germany, where they are early K n is a p-pullar here. The writer driven from their homes, and a number of found him laughing and joking with the years are thus deprived of the best portion, and bandying course jests with them of their lives. A remarkable fact came to suid the guards. Some one had given him light among the French people after the sistend on, and he had got from disastrous war they had with Germany some other charitable person, some rice The Germans held Paris, and they didn't and water and a paper. "It may be that calculate to leave it until the French paid the sight is such an amusing one, and the the former the expenses of the war. Did victum is such a witty fellow to judge by the French have to call upon any other the laughter with which his sailles are renation for assistance? Not a cent's worth, cere d, that the by-standers are anxious to ers and vin-yardists had been filling little. The people are sord to be full of admiraby little, during so many generations, were then for the Magistrate's firm and intellibrought forth and the contents freely gent administration of justice, but the offered to the government, to get rid of the Shangh it writer, yows the matter in a now hated Germans, being secured by their different light: "Here is a nation claiming government bonds, which has been to the moto take its place with the leaders of civilization, introducing railways and telegraphs, sending its Manisters to foreign courts, and asking to be treated as a sister by the great Powers of the wordly and mone of its force enough reason why they have always been most cities, administered by an Englishable to retain their homes. Their univerforeign setti ments provided with all the speaking otherd, and within a few yards of ris areas of mild in civilization, a crimiand done to death with circumstances of gether, the court is some in the Unite erusity that would be tolerated in the States described sometimes. The Court is sometimes and the Unite States described sometimes are the Court in treatment of a dangerous wild beast in a ----

A BRIDGIANT OFFICIAL

Stephe T Gage, one of the shrowlest f Pacific to est rulroad men, and a closobserver in all matters pertaining to the says Socially a.t. level pment of this State, has been inter- I proked application siewellty a reporter of the San Diego Box, where some neight a had the wind and gave the following as his opinion of off a stocky so to a transport

annuy place, top-end down, so that the of the greatness of this State of 1 some or most horizontal energy upper end is about ten or twelve inches becomes ask myself. Will this State over Proporties measurements for low the surface of the ground, then path qualithe and, affinent and densely population about two inches of good soil, and cover lated impressof Now York of Lanswer these the needs, man no only in with a thick layer of fermenting hers. Here we are hear the southern boundary and a leafly manner. This, with the warm rays of the line, one thousand unless away from the fibeless and leaves sun, soon warms the layer of earth on the morthern boundary, there is no other State chapters' axis at shift cuttings, and not only induces the rapid of such is what a quitation will it 12 or 14 in hes on test callonsing of the buts, but the formation of support. Whay should See Transisce not per difference roots also. At the proper time take up the leavest a second No. Yorks. And Six sites in rest following cuttings and put them in a well proper d. Dogo, with its integration that both in firmy treated to exceed cutting bed, and the rapid growth will second city on the coast. I su know I am and per determines I an enthusiast on the State. I have been Then I filled a large with water hawh, halk ports of the count resion.

Gerade of this

velop A feath or by to manifex density pleastrony's the Lorenzy's tion. There is the comparison to Kimsus very yor. Littins no to California and the result with and surprise overy medical to some as I have already said. fatur f Canforna, f . i. that her fata eas by a tion or expectation.

AMERICAN ATTACKS

the expectation folia-England que definit in main 2001. b h fou this sale to there is a to not fortifically many facts, that $\langle m \rangle_{S}$ what the energite with Color basis, produces a great restrain for all American than in Engern Land that as a consequent imen to not ity as long her. We have startly twell upon the greatest and a re-(vity of Mr. Goviston and others, and). for any summar specim as in the I are States, in time, we Am it ans, ours live are disposed to a limit that into is long row. England than here. The J -eth atterior thor uch investigate note is a subtrary. Taking what may be haid lie age, there has a transfer at which is "the expectation of life are a substitute in the w ment in two contines for monories year greater here $(t^1, \, \mathcal{O}_{t, \, \mathcal{O}_{t, \, \mathcal{O}_{t}}})$ theres: hdive, therefore, has the expediction of averone yar longer than his Battsh for ther. $\Lambda_{\mathbf{S}}^{2}(\mathbf{m}_{i})$ in $\Lambda_{\mathbf{m}}(\mathbf{r}_{i})$, in a hard of \mathbb{R}^{2} "expectation of lift" than which is Lagrand it is the country, To in the agof thirty-five the British which has a band or brother. In Your, a big to early feer, the moral saturbate appear of of Am rican men.

FORCING THE GRAPE

A correspondence to he fatare of California (X) one has as yet a proper conception bearing close 1 flow there are

arb tat t amount visit that the late . I has the tips to be on the result of the fit of the fit. 21 to thick in make for the class 26 for and a formation This wire

BINGING THE VINE

Mastra byr. or its for the parand to rearly this result of the exposes of ear thresh The effect of the market is to the fruit, "The nevelty the first playes that appear story in to till an analog for ity in I they refuse to h h, al. will at at vtlang to found with more if such A. Castaji n Grop , which morne to the mark to and both these so, will be a loy sty authorisail to y it orgenite promity to partially satisful with their first or has so call if not good, they lightly lands, or white the and tissup-

Potash for Vines.

their burgued materies are not git it in which is start on the night y or more but rithin no manuring forts fistable manufes are an excess hatright, brising a saw growth of vine all the latter of a moral fertilizers which the fruit. An apparain shof potash sprace runy true directly growing as this very length old, and country vines ards or mount I aim st excessively by a selection the burns I trimmings of process. This lashes are very rich in tash. This man oil for its especially and, the part ting early up ming. the solid with it at samply in most and the van and any paper shall be perfected to the control of handing the harsh soft the grown and into the richness the report to . In our spinion, our were boy a tight in that are full afterinis to manufact their vines which they ---

IN THE MINES the distance of stars the continues in well to are mode at intervals the full place of bring the appar-ulation of place it which results from the Late of the Annual of the Consequent so the transfer of the searth's orbit. the state of assume, the outer I to granter that out a stars with the two could be and the course of The and the state of the state

W. t th. H n J F Total Landing Mr Linds, ingthe Lagrangian is The Australia rate - 1 logres

OUR NATIVE WINE SHIPMENTS RY SEA.

TO	NEW	YORK-PER	Ship Sr	Paci,	APRIL	13, 1888.
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MARKS.	simpress.	PACKAGES AND CONTENTS.	HALLONS	VALUE
V T C & Co	Wm T Colorian & Co	Tou harrels Wine	1,953	81,31%
in diamond	C Carpy & Co	125 barrels Wine		
4 ! 3! 3		75 larrels Wine . 500 harrels Wine	21.073	3,84° 9,629
f in diamond	B Dreyths & Co	31 tarrels but		5 5 cl
F J		I barrel Brandy	1,430	190
D & Co	0	515 barrels Work		11.81
	Lachman & Jacobi	1150 barre's Wine.	55,916	22,398
		15 hult-Larrels Brandy	112	SQ.
B & J		200 barrels Wine	11.514	5,80
	Whitrier, Fuller & Co.	a barrief Wane	50	21
AS	Kolder & Frehling	50 kegs Brandy	535	1.17
	11	30 half baro is Brandy	740 26,0 9 2	2,65
& F		196 harrels Wine	9,915	10,436
**		100 barrels Wine	5,0:0	16.10
W & B	Downing & Schmidt	51 barre's Wine	2,402	96
	John F Wil on	I cask Wine	(51)	2
	J Gundlach & Co	175 barrels Wine	8,370	3,34
		25 barrels Brandy	-1.680	3,36
A S	**	I I half-barrels Brandy		
***************************************		200 harrels Wine	9,476	3,78
W	Field & Stone	1 half barrel Wine	25	10,61
1 CO	Schilling & Co	135 puncheons Wine	11.834	4.73
61	**	GO barrels Wine		14.19
C & Co		213 barrels Wine		4.63
	,			
Total amount of Wine,.			259335	8103.73

PER P. M. S. S. CO'S STEAMER GRANADA, APRIL 14th, 1888;

J C C Carpy x Co. 1.7 barrels Wine. 81b F B C. 5 barrels Wine. 25 K K. Dresel & Co. 13 pune learns Wine. 15 like K in diamond Kohler & Van Bergen. 50 barrels Wine. 2,309 A V Co. C Shilling X Co. (40 barrels Wine. 4,636 B & Son. 2 cas & Wine. 126 C H G M. Napa Valley Wine Co. 12 barrels Wine. 65t I barrel Wine. 1	\$425 50 120 765 2,509 1,880 116
K K. Dresel & Co 13 puncheons Wage. 1,318 K in diamond Kobter & Van Bergen. 50 learnels Wine. 2,509 A V Co. C Shilling & Co. 60 barrels Wine. 4,696 E B & Son. 2 casks Wine. 126 C H G M. Napa Valley Wine Co. 12 barrels Wine. 650	120 765 2,509 1,880 116
K K Dresel & Co 13 pune/neons Wage 1,318 K in diamond Kobbler & Van Bergen 50 barrels Wine 2,509 A V Co C Shilling & Co (60 barrels Wine 4,696 E B & Son 2 casks Wine 126 C H G M Napa Valley Wine Co 12 barrels Wine 564	765 2,509 1,880 116
K K Dresel & Co 13 pune/neons Wage 1,318 K in diamond Kobbler & Van Bergen 50 barrels Wine 2,509 A V Co C Shilling & Co (60 barrels Wine 4,696 E B & Son 2 casks Wine 126 C H G M Napa Valley Wine Co 12 barrels Wine 564	$\frac{2,509}{1,880}$
K in diamond Kobler & Van Bergen, 50 barrels Wuo 2,5093 A V Co. C Shilling & Co. (60 barrels Wine 4,4696) E B & Son. 2 casks Wine 120 C H O M. Napa Valley Wine Co. 12 barrels Wine 5 650	$\frac{2,509}{1,880}$
A V Co. C Shilling & Co. (40 barrels Wine 4,4598) B & Son. (20a-ks Wine 126) C H G M. Napa Valley Wine Co. 12 barrels Wine (56)	1,880 116
C H G M Napa Valley Wipe Co. 12 barrels Wine) 650	116
C H G M Napa Valley Wipe Co. 12 barrels Wine) 650	
CHO MILITARIA FAMILIA MARCOLLI PARTICIO MINORIA	560
	0.10
B D & Co B Dreyfus 100 barrels Wine	1,252
C V Co	
C V Co	625 170
Din diamood	
J M C. Lenormand Bros. 50 barrels Wine 2,532	831
A V Lachman & Jacobi 20 barrels Witte 1,0181	339
J 1 U	84
A in diamond Sooi	277
FA 50 Darrels with 1,510	414
3 in diamond	256
E V Bin diamond 10 barrels Wine 2,004	704
J H L in diamond	63
0 J Gundiach & Co	1,622
P in diamond	470
K & K	
7 barrels Wine	654
K&F Koh'er & Frohling 55 barrels Wine 2,801	1.230
EB&J Laconnan & Jacobi 100 barrels Wine 4,922	1.340
TS. Williams, Dimond & Co 5 cases Wine	100
A December 1 of the control of the c	100
Total amount of Wine, 35 cases and	×16,935
Total amount of Brandy. 25	50
Total Smouth of District	- 50

TO CENTRAL AMERICA.

A S & Co, Corinto	evfus & Co	. ti kegs Wine	513	8100
A D, La Libertad	***	2 half-harrels Wine		
"	4.6	6 kegs Wine	86	120
ID, La Libertad		12 kegs Wine	120	150
D K, Acajutla	16	Chalf barrels Wine,	82	7.5
R. S., Amapala Mon	tealeure & Co	40 kegs Wine	480	450
F A, Corinto	millach & Co.	10 cases Wine		40
D, Amapala Eng		3 octaves Zuifandel		31
		3 octives Port		1.1
44	(1)	2 octaves Malaga		27
P. D. Amapa'a John	T Wright		33	22
E, Amapala	11	2 kegs Wine	20	15
M, Amapala	44	14 kegs Wine	140	110
41	14	1 keg Whiskey	10	30
ET, Amapala	6.0	2 ktgs Wine	20	13
H, La Libertad Urrı	rela & Urioste	10 cases Whiskey		80
F C, Oces	61	G cases Wine		21
0,000	F1	1 cases Whiskey		51
44	+1	3 barrels Wine	64	17
7 O, Oces	11	S cases Wine		4.5
E, AmapalaCubi	rera. Roma & Go	17 kegs Winc	204	190
S. Guatemaja	11	12 eases Wine	201	5/
LO & Co, Amapala,	11	I barrel Wine	351	38
R & S, Amapala	ti .	1 barrel Wine	20	18
- a of morphism				
Total amount of Wine 36 ca	see and		1.397	81.613
Total amount of Whisker 1	Lancon and		10	16

TO MEXICO.

W M, Salinas Cruz	Chicago Erewing Co.	4 kegs Wine	401	82
& C, Sac Blas	Thannhauser & Co	3 barrels Wine	7-4	5
B&C, San Blos	11	100 kegs Wine	160	14
0 C. San Blas	*1	10 kegs Wine	160	7
F, Tonala	W Loaiza	20 cases Wine	411	20
FC, Acapulco	**	I barrel Wine	51:	3
B, San Blas	4.4	1 keg Erandy	10	- 2
B C, San Benito	- 11	7 barrels Wine	107	9
H, San Blas	J Gundlach & Co	10 kegs Winc	146	16
		2 kegs Brandy	32	,
11	# 6	4 cases Wine		1
M, San Blas	J.O.Mevennk	1 box Wine		
M, Acapulco	0	9 barrels Wine	275	32
0	4.	7 barrels Wine	235	5:
D & Co,	W Loaiza		178	
San Blas	4.6	2 casks Claret	120	4
D & Co, Acaputeo	B Dreyfus & Co	5 barrels Wine	255	18
· i.		25 cases Wine		1
P, Mazatlan		2 barrels Wine	101	7
Total amount of Wine.	30 cases and	······································	2.323	81.7
			(24)	10
	TO CA	ANADA.		

D W, Toronto.	Lachman & Jacoba 1 barrels Wine 1 half-barrels Wine	308	8226
	TO NORWAY.		
E K E	Dresel & Co S barrels Wine	465 [\$302

TO U. S. OF COLUMBIA.

N N S, Bananquilla | Wm. T, Coleman & Co | 4 cases Winv.

	MISCELLANEOUS S	HIPMENTS.		
DESTINATION,	VESSEL	RIG	GALLONS.	VALUE.
Аріа —	H L Tienan	. Schooner	126	8116
	Umatilla		85	78
Japan	City of Rio de Janeiro	Steamer	930	300
Bangkok	City of Blo de Janeiro	Steamer	26	50
Victoria	Mexico.	Steamer	920	791
Honolulu	Mariposa	Steamer	1,334	858
	Occanie		200	10€
Japan	Oceanic	Steamer	=1,030	1,552
Beston	Mexico	Steamer	2,536	1,039
Total			10,196	\$4,887
Total shipments by Par Total Miscellaneous shi	pnients	43,39 269,59		20,843 n4,773
Grand totals			23 \$1	25,616

A KIND HEARTED SENATOR.

A Washington correspondent of the Los Angeles Express writes: Senator Stanford is very fond of walking around the city. He walks slowly, and sometimes he appears to be a little lame. Some distance behind him, and traveling at the same rate of progress, you will see a weather-worn coupe and horse and a colored driver, who wears a fur cap both Winter and Summer. The last thing you would imagine would be that the millionaire Senator had anything to do with that turnout. The coupe looks as if it had met with a Western cyclone. It is old, the varnish has faded and cracked. the wheels are sprung, and the horse looks as if it would tumble to pieces if taken out of the harness and shafts. At an auction the entire outfit would not get a single bid But notwithstanding all this, that coupe is known among hack and cab drivers as "Senator Stanford's coach," and the old colored man as "Senator Stanford's coachman."

Senator Stanford keeps a number of fine horses and carriages, but in the Winter time he seldom rides to and from the Capitol in his own conveyance. His reason is that he will not expose his coachman and footman to the cold while waiting for him during the sessions of the Senate. It has thus become his custom to walk out to the cab-stand and hire a cub to take him home. In the course of his frequent visits to the cab-stand, he observed that the old man in the fur cap seldom received a job; that he did not possess a point of vantage, and had a hesitancy about offering his services. One day the Senator walked up to the old driver and asked him why he got no business.

"I'll jes tell ye, boss," replied the driver. "Ye see mos' of des folks up hyar is doods. Dey wants a fine hoss, a shiney harness and a tree thousan' dollar kyaridge to do a 50 cent job. My rig don't cum up ter der mark; and ter tell de trufe it don't look fine But den it's jes as good as de bes."

Senator Stanford got into the old coupe and was driven home. At the end of the trip he surprised the darkey by paying him three or four times the regular fare. The old driver was so joyful and grateful that the Senator made a stipulation with him and has been riding in the dilapidated rig many times since.

As I said before, the California Senator is very fond of walking, and he takes all of that kind of exercise that a weak ankle will permit. If the weather is pleasant he will walk ten or fifteen squares until his ankle begins to hurt him; then he is compelled to have a conveyance near, and in order to have one handy he told the old colored driver: "Whenever you see me walking you follow me. Keep in sight, and when I want you I'll summon you." This explains the reason for the "coach" and "coachmen" following the kind-hearted millionaire Senator.

BALLED FOR GUDGEONS.

The Associated Press has sent all over the State the following fishy appearing yarn from San Diego:

Reports of rich gold discoveries in Lower California have created much excitement in this city, and prospecting parties have been fitted out and gone to the scene. It has been ascertained that a number of experts have been in Lower California gold fields, and brought back to their employers quiet reports of rich discoveries. The Union publishes an interview with an expert who has been in San Rafael valley. He states that in travelling over the Sierra Madre mountains he discovered a tract thirty miles long and twenty miles wide, which [forms one large body of mineral ground. There are hundreds of veins, he says, averaging from three to thirty fect in width, principally composed of free gold and white quartz, which is easily worked and essays from \$300 to \$2,200 a ton. Placer grounds are reported to cover thousands of acres, and are said to be rich in gold dust and nuggets. The mountains contain several streams of water which have a fall of from 1,500 to 2,500 feet, making the locality available for hydraulic mining. Other discoveries have been made beside the one alluded to. In every case the sopply of water is reported to be good and all the conditions favorable for extensive mining operations.

A gentleman now residing in this city informs the Santa Barbara Times that this is untrue in every respect, and is simply a scheme to entice people down into that God-forsaken country. The gentleman referred to assisted in surveying the identical region referred to, and has been all over it. He says that while gold may exist in the country, it is in such small quantities that it would never pay to work, and as for hydraulicking, it is simply impossible on account of scarcity of water, the few small streams in the country running absolutely dry during the greater part of the

It is to be hoped there will not be a rush of fortune hnuters on the strength of the dispatch copied.

ELECTRICITY AND PLANT LIFE.

Experience in the winter palace of the Czar at St. Petersburg, iodicates that the electric light is injutious to the exotic plants used in the decoration of the rooms. Dr. Siemens lighted his greenhouse by electricity and found no detrimental results, which suggests the theory that the waste steam from the engine driving the dynamo, with which the greenhouse was heated, counteracted the evil effects of the light.

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FACES AROUT OLIVES.

A for ign correspondent writing in the data of the clive in its home. He say "It was interesting to learn that the oil ranks next to wine in Italian agriculture. In 1880 it reached a maximum of 74,500,000 gallons, but is reported to have averaged b. fore that only about 38,000,000 gallons Exports for the five years ending with 1885 averaged 10,000,000 gallons, but in tout year, owing to poor crops, it fell off to 9,633,000 gallons. In Southern Italy the processes of making olive oil are mostly rude, and the groves are greatly damaged by the musea oler or olive fly. The finest oil is produced in the hilly districts of Tuseany, such as Lucca, Calci and Butt. The trees are of the best stock and carefully tended, and great care is devoted to harvesting and pressing the fruit. It is difficult to buy oil in Italy which is not adulterated with cotton seed oil, of which imports were made for this purpose in 1885 to the amount of £270,000 sterling. It is also diluted with

poppy and Sesame oils. practices in Southern Europe, respecting olive culture. It is an aucient fiction that exist without fertilizing. Modern agricultural authorities say no fruit responds better to good culture and manuring. Some of the modern ideas are these: The olive succeeds best where the temperature averages about 57° and does not exceed a maximum of 100°. It flourishes best in dry and hilly regions. It does not do well on alluvial soils or on sandy plains. In order to escape suffering from dryness in summer, it should be very thoroughly watered in winter. This done it is alleged to stand very prolonged drought. In regard to these maxims, however, California needs to experiment for herself without blindly abiding by them. As manure is dear and scarce in European olive tracts, human exercment is recommended as a powerful agency in cultivation, as also horn scraps, woolen rags, leather rubbish, oil cake and guano. But certain fertilizers furnished by the olive itself are strongly advised. The trimmings of the trees are utilized as forage for different animals, and the manure should be scrupulously preserved, or at least, if not fed, they should be buried about the tree. The oil cake from the mills is of great value, as also the saline juice. If this fluid cannot be used for watering, it should be collected in receptacles and permitted to deposit its precious residue. Pruning should be done in moderation. Excessive cutting back is poor policy, as is also the ancient enstom of permitting the tree to grow dense. The same stalk will not flower twice, except on its extension, and the development of fresh shoots is desirable for fruit the succeeding year.

The olive appears to affect the sea, but in Europe it flourishes as far inland as ninety miles. It does well in the neighborhood of Nice at the elevation of 3000 feet. In regions remote from the sea and exposed to cold, rugged trees are preferred and modern anthorities recommend the Verdale. Near the sea, fruitfulness and quality of oil is the object of desire. For this region an eminent French anthority recommends the Cayon, which pushes rapidly and comes early to fruiting. It is low in habit and dreads the cold, but it recovers itself quickly after a freeze. In case of serious damage tree to the roots, when the fresh growth will lax and diameter.

begin to bear in two or three years. The Cayon fruit is reddish, gives a first quality of cit, and preserves the flavor of the fruit Citrograph, gives the following interesting which southern epicares delight in. Another recommended variety is one usually called the Pendoulier, but known by varions names. It is so call dibrause it has a weeping willow form, the limbs drooping down from its lofty branches. Like the Cayon, it gives a good crop every two years. The fruit is black, slow in maturing, makes a fine oil without flavor of the fruit, which northern customers prefer. These trees do best in special culture-that is, not mixed with other crops-and with good maturing and frequent pulverization of the soil. Southern European growers prefer to grow their nurseries from the wild olive seed, which is larger than the cultivated. One advantage, especially if the seed is put where the tree is to remain, is the long tap root, which in case of removal has to be cut by reaching it from a trench. These seeds develop more vigorous trees, it is asserted, and as all olive trees are grafted there is no special disadvantage in using the wild seed. This seed readily germinates also, having There have been many absurd ideas and been digested by the wild birds. In ordinary cases the seed has to be prepared by chemicals or by opening the nut to the air. the tree will flourish in the poorest soil and It is also a custom to feed the fruit to domestic fowls and gather up the droppings all ready for planting. In the case where frozen trees are cut to the ground it is recommended to do no trimming whatever the first year.

There are two maxims which are given by the modern authorities as of great importance in a country of irrigation or protracted sunshine. One is to specialize cultures, planting the various crops in patches by themselves and not permitting the growth of any annual crop between them. The other is expressed in the adage, "no crust, no clod, no herbage." There is also a maxim, "a pulverizing is equal to a shower," and another which says, "pulverizing is mulching" and should be practiced frequently. When the ground bakes myriads of infinitessimal capillary tubes are developed in the soil and speedily exhaust the earth of moisture. Humidity will be found nearer the surface of pulverized than of hardened or cloddened ground. As to herbage it was noticeable in Redlands that the trees which suffered most from freezing last winter were infested with alfilerilla and other ten weeds. The idea that this growth pays its way by being let to flourish for a season and then being turned under for manure, has no solid support on European authority. These are some of the points of information we extracted from our brief interviews with the olive jars at our hotel tables at Genoa. To go extensively into the crop question would overload the narrative of our adventures. One remark, how ever, comes in very properly just here. There are many ignorant and erroncous methods of agriculture even in these old countries. One of the great labors of modern science is to correct them. Therefore, a new country like California cannot afford to take up blindly every old-country notion, however much it be hallowed by ages of practice.

Occulations of stars by the planets are extremely rare, but Dr. A. Berberich, of Berlin, believes observations of them would be very important, throwing light on the extent and density of planetary atmosphere, and in the cases of Mars and Venus affordby frost, the recommendation is to cut the ling a means for the determination of paral-

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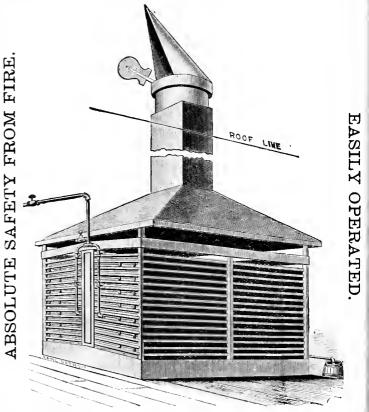
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COLOR IN GRAPES

In growing seedling grapes, writ's 10 S Maryin in the America : Gorde we are just ns upt to get a so-called what grape from a black one and view visa as one of the color of the parent stem. From the thousand of seedlings I have grown and observed, I denot think that hybridaying has any effect in determining the edgrachings strings. The coloring matter of wire is well studied in Thuslishum and Dupre's exhaustive to dion wine, and meidentally the coloring raid ter of the skins of grapes is illuded to. O page 264 it is said: "The pure of most grapes is perfectly free from tuning the skins and stalks stems however, contain a considerable quantity of the substance which, though not or mary timum, closely resembles it in properties,". On page 255. "Color in wine is produced by the explizing off et of the air up or matters contained in grep s, the so call destinations, on bodies not yet known and the taunce sold. ' It will be seen that it is the effect of simlight neting upon the tamine and of the skin and thes, unknown bodes that play so important a part in the color of wine; this leaves the origin of color somewhat mashudi d.

But back of all I believe there are consentirely outside of chemical a tion and reaction that have led up to and originated. The prices given show the extremes of the the color of the fruit. I refer to the inthe new of birds in sell-cting for color, the interchanges of action and reaction upon wine is given; the slow, gradual development of the fruit It is not yet known from what plant the grape originated, but from a correlations sideration of the tenden as of the plant, the seedlings braking to to such a beautor of species, and makes the experies a one into such a man itade of variation, who are s vari this sporting into so in my in we thatand colors of skin and pulp and so ds, wi must couch ide that is for his sait door his an influence upon some of the plant's vitaeconomics that the color of the face has come to be of very good map reason to the weltare of the plant.

The vine had its origin, since the odenthe tertiary pariod, the coay front being small and in inspicious Some of the plants and matter, spatiers, have frem favorable environment, descoped higher colored berries. The birds being attracted fed upon the berries and carred the seed to a new and perhaps more favorable environm at, where they germinated and developed still more attractive frost. If one dine it clime and age to age this opening is unued, until finally primitive is on, count a to the aid of the lands and no conzul, the attractiveness of the food vida of the horst, big in its soliction and cultivation, always selecting from the largest and most party varieties, that he fore, perhaps, had been luttle more than skin and see is, and, like the bank, solveting the highest over all and most attractive vari it's for di tetre ponposes, dissemination and improvement, until civiliz doman, taking the plant or der control, the grapes of Eshe d finally gained an historic record with all their attractiveness and aliming colors, the bright colored fruit always to ing chosen by birds and man

With some varieties of grap's, like the Concord, there is little or no eccoring prements in the pulp, the coloring matter, as

Mr. Darwin and those who have studied on this season's mark to the colors of the plumage of birds have sugested that their brightest tints have error and din and through s vall schetters, but the origin of color in grapes must b attribut dates election for dictetic purposes, but wine is so rifeed to the Market by the past joint action of bards and man for of course, manly and for longing seethe lands done. And I am convinced, from study of our matry grap's, several a this species appear obtain than Volsion $\phi \rightarrow th$ it it is generally in the obb-st-spaces that we find the dark color of skin, seed and prices to disgust the conservers of the p.p.p. while our most r cent spaces havmore purple and red metead of darker pag ments. In closing the writer desires the dear to be considered more as suggestions the earlier others to study the topic than a Shished contribution to exact knowl dge.

PRICES OF WINES

1. D. Combi, in the State $\gamma = \gamma V$

To the benefit of these who do not so the to radio that there is no just cause for the prevailing low pages of new wines in this e unit; and Stat , w will give hire a syton sis of the prices of new wines in Italy during the well ending Junuary 15th, 1888 market for or linary red and white wines When executions are made the name of the

Landerson Sect.	- Alboh	and the second second	1510200	111
Torm.		1st quality	10 to 50	6.1
	1.0	2nd quality	35 to 30	* *
Allex	4.9	OF OCCUPANT A CONTROL OF	25 to 359	> *
		Participal Control	25 (32	
4			10 to 50	
14			55 10 115	
		rdmary.	21 to 32	6.1
Coals Mill			24 to 30	
Sec. 11.6		. 1.11		
V		A F a DiskF	24.1 (39)	
Lennel	1000		22 to 35	3.3
To deside by			20 (7.2)	* 4
Parus	10		25 ta 10	
Vervoca	1.		21 to 32	1.0
Fr A180	6.6		2501110	h P
100 127 4	1.6		20116-26	6.5
1 11 12 1				

The above list from all the principal mar k is of Northern Italy is sufficient to show that they receive a much higher price for their new wines than we do, notwithst archive the fact that our order my Zinfand I, when firm sted, would be consil red above the sudminy wine so called ther .

We had occasion to biste some Barb raimported expressly for comparison, by the Hon, John T. Doyle and submitted before the State Vinesgrowers and Wine-makers Association at its regular in eting on January 3rd, in San Francisco. That with as quoted new, on the place of Asti at 40 to 50 counts per gallon. They relief of these who tasted the Burbera that day, was that it sould not even compare in quality with good. Zurfandel.

We should consider also that a great but of the crops of 1880 as still in the grow reedition Italy, which fact containly must have a tendency to lower the price of a w with Comparatively speaking, we could afford to d liver our in a wines on the It draw mark to at such prices. These facts have a twofold interest for the vitie grow is $\bullet f \in \operatorname{dif}(\operatorname{inta})$

1-t The price paid for new wine to the producer here, little or no compare on toots intrinsic value as an article of general commeter, or as compared with similar wines

markets of South America, provided we are the Amaiand Wharf we would naturally suppose from the sug-ladlowed to fortify our wines if so desired. The sap rightly of Kaun to I can a gestive cause of its origin, residing in the they will have to use their inferior wines to blue goin, under heavy we are a skins. In some varieties, those of which most our prices. This they will be able to be a demonstrated by the anorthology colored wimes are made, the pigments have dear long as we are not allowed to formly bets on the Ank in two in which form gone from the skin into the pulp, and even our dry wines or as long as we do not use the seeds are dark, as in most of an ripanal better wines to win that trade, than those latter, under severe tests.

grapes and seed of the natives of Europe that have been a shang for 12 to 45

While we are willing to cone do that, in the present stage of water making, the i = imuch win that is not with a viry him prior, we ombit I that egged 4 % f $(h \otimes_P t) \circ h = \mathbf{T} h \circ \infty \ \text{ wh} \ (\cdot \) \ (a + b - t) \circ (\cdot)$ ones to uphold the value of our co-when brought in competition via hitter foreign leads, so to fold the first of the hen that laid the getting assumed by their system of emieither force these to become here. to raise other kind of fronts lesabe and

One more compatisen, and it is all this is the country of freed on its dr. d. sense, it is also carsed by the greatest assaber of monopoles, trusts, syndicales, etwhose Trincipal purp so is to the thin tiller of the soil within at, in hoof his oil . and without the interference of a conment for the people and by the people to it run for the ben fit of the strong.

THE KAURI

The Kauri (Dammara Australis) is the finest tree in New Z aland, and profite the most valuable timber - It is record to the northern part of the North 1- and and does not occur in any quantity sind. of a line drawn from Port Walkate to Tam angli, although siditary trees or sin groups are found as far south as Maketian; the east coast, and Kawhia on the west. It attains the height of 120 to 160 feet as apwards; chan, symmetrical tranks may be seen from 40 to 80 or (ven 100 for the length, varying from 4 to 12 feet and 4 words in drame ter. The timber has begin ed a repatation above all N w Z alam kinds from its value for masts, spars, an other purposes of mayal architectur , who led to its being expected for use in th British deckyardsabout the commencement of the present c intury.

Except for general building purposes, it us has been cliedly confined to the North Island, where there is abundant evidence of its durability for more than thirty years in some of the old massion buildings at the Bay of Islands, the wather-boaring of which exhibits no signs of decay. The sain must be said of some of the obb-t houseof the city of Aukland, and in other part of the province, although I have been unable to obtain trustworthy evidence of the exist nee for more than twenty-latwenty-four years, as in all the t was no of the old buildings have been removed t make way for improvem ats.

Kauri has been employed, in each metre with totals, for the approximation of the Aukland wharf, the largest work of the kind in the colony, and with most simfactory results. Brac's, stringers, and tr leans are in good condition ift role in eighteen y ars in us. The areable portre of the old Wynsard pur was toolity to moved in the formation of the Wakarailway, when many of the traders was found sound, aithough others war more, decayed, after fully twenty the year so rvice.

It has been at raisely used for him. in the principal markets of the world, and timb is with the last rashing but I make and. In order to compete with it in the law it. If any misting of order date the

A the formula times, the rewer regard outsite graft in from the technic cats use of the astern as done the transpose of the fill and the transpose of the fill are the fill fill where it is useful a fill and the fill and the fill and the fill are years in

met miner was to maryland The were out from small-sized trees the in the point rheed. Totars and That the same time have perthe transfer of the from Laving

to make some of the together in On the Largest in find it is used for each paper rule and approximate and thus assert for durality, as the state of all so the kales and black then - left a count of their

1515 01 13,3105

Lomorous form pace of the lemon is one is one of the best and safest drinks for any person, whether in health or not. It is uitable for all stomach discress, gravel, even implant, if $x_1 = x_2$ is fithelow is and $x_2 = x_3$. It is $x_{i+1} = 0$, for against $x_i = x_i$. all similar plants. Lame a part as the Smale Trily to the for this pur-Ladvise every or to not their going radition are to keep in them good one itin. In hat to and note in Light n, which soft it says to the day you the institute of a song. It also pre-

Lar sees I are at the enter for r, and dwarf to he, he clock of the withof such and Norders may be constally at such a magning of closel ty, atomic the part of at a without let in the source of the construction of the construction of the construction of the handwise the largest transfer of all finites of the handwise the largest transfer of an I finitely transfer of the construction. a more was a pay respectly the serand brack to A. Coran Remais to and My rimentary to mandata feet as

CALM MINE COMPANY

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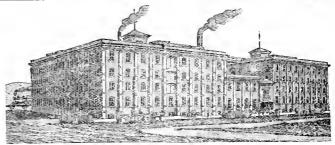
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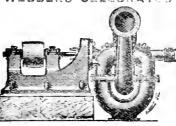
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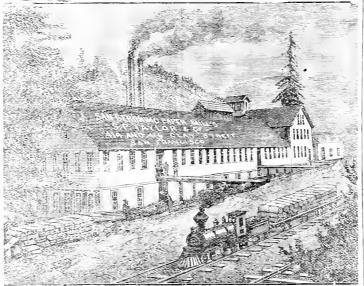
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VOL. XX, NO. 3.

SAN FRANCISCO, MAY II, 1888.

PRICE 45 CENTS

Report of the President of the State Board of Viticultural Commissioners.

SAN FRANCISCO, April 11, 1888. To His Exectioncy, R. W. Waterman,

Sin:-The Old Mission Fathers planted the grape vine in California immediately or shortly after their arrival, previous to 1770. They planted small tracts close around their Missions, guarded them jealously with high adobe walls, cultivated them carefully, gathered their fruit and made wine. These wines, so far as we can learn, did not enter into the trade of those days but were consumed by the good Fathers, their occasional visitors and their immedinte retainers. Even after the arrival of Americans in 1840, and with them representatives from every civilized nationality on the globe but little advance was made towards increasing the area of viticulture, till the year 1858, when, through the publication of vine articles in the reports of the State Agricultural Society, and in the newspapers, a general and wid spread interest manifested itself in vine planting and the area of our vinevards became very greatly increased. A very large proportion, however, of these new plantations consisted of table grape producing vines, and the remainder was almost exclusively composed of the old Mission variety.

Towards 1862, vine planting arose to a genuine enthusiam and a lively interest was shown in selecting better varieties for the table, for the wine press and for raisin

Of the three Commissioners appointed by Governer Downey in 1861 to report upon the best means and ways to promote the improvement and culture of the graps vinin California, Don Juan Warner returned a clear concise report on the State of Vin-Culture at that period within the limits of our State. On the other hand, the lat-Agoston Haraszthy went to Europe and and after visiting all its most important viticultural districts mode an elaborate report on the European methods of cultivat ing the vine, making wine and curing of raisins, adding practical sugg stions to the California vine grower, and at the same time bringing grape-vine cuttings of every attainable variety in Europe, Asia Minor, Persm and Egypt. These were

cterwards gradually distributed in small lots to different parts of the State and formed invaluable nuclei for experimentation. No report was ever received from the third member of the above Commission.

Towards 1870 the production of wine and table grapes became greater than the demand, and our viticultural industry began to lag and finely became so discouraging that in 1875 many vineyards was either abandoned, uprooted or replaced by orchards and grain fields.

In 1879 the demand for table raisins and wine grapes caught up with the supply, and a new interest was awakened in viticultur. Our raisins were looked upon with charity in the East, our rich clusters of table grapes admired and sought for, while our wines, though still very crude, had found more numerons and less exacting custom-

Up to 1880 those who believe in the value of varieties of grape for wine making, other than the old Mission were few and far b tween. With the exception of a very limited number of vine growers, none believe any grape could be as good as the old Mission, and we have even at this date a Quixotic spirit existing in some parts of our State still advocating the planting of this very poor quality lacking grape.

Experience has shown that it only produced an ordinary, coarse, heavy, it cyorleswhite wine, taking an indefinite period to mature. Such questionable qualities as it may possess in the production of a white wine are more than overlalanced by the miserable red wine made from it. And to this cause more than any other, I attribute the had remutation our wines had earned both at home and in the Eastern States, previous to the more general planting of other and finer variety s of graps s

Many claims have been made by the admirers of the Mission graps but none have been proven. It hears unevenly, rusens unevenly, and takes upon itself almost every disease that com's along. In this respect we have to congratulate ourselves, for soon the Physloxers and the grafting knife will have rid as of its presence in our viib vaids In point of fact, most of our vineyards are in aw planted with vines more hardy, r. sisting disease better, more constant bear is, producing the r qualities and greater quantity than the Mission ever succeeded in doing under the most favorable conditions.

terprising viticulturists, small quantities of wine have been produced from the imported varieties, whose character was so distinctive and so strikingly showed superiority, over those made from the Mission, that Board consisting of mile Commissioners. new faith was born in the future of Cali- The officers of the Board wer to consist of forms wines, and the belief spread that nuder proper conditions, our State might some day make wine of a superior grade, and eventually rival some of the better wines of European Countries,

At the beginning of 1880 our viticultural interests were in a complete state of chaos In spite of the efforts made by our wine the State having the appointment of these makers and wine merchants, only a limited market had been secured for our wines in the Eastern States, and though the domaid showed a steady annual increase, it was at the slowest of rates. Even that small increase however, was considered gratifying honoraldy maintained up to this day and hailed as encouraging,

The crop of the year 1879 had been a short one. The old stocks had been ex- 1450v rnor, 19th April, 1880, and immedihausted and suddenly the price of all kinds ately upon receiving notice to that effect, of wine went up, and the supply was barely the Commissioners assembled, organized sufficient to meet the demand of the mar- the Board and shortly afterward log in their

This awakened the more general interest of the public in vine planting, but there was a worful lack of knowledge, a want of Vitigultural Commission is as above organsystem, no beaten paths to follow, and but $\gamma_{M^{\prime}}$) a few acknowledged authorities to apply to Acpud Harasthy...... for imformation. Numerous newspaper | Commissioner for the San Francisco Dist. articles appeared calling attention to the Chas A Wetmore value of viticulture in our State, and expressing the desire for the formation Chas King of some State Institution, where such practical knowledge might be obtained as was necessary to the successful conduction R. B. Blow is of this important branch of agriculture,

Under these influences soon after the State L gislature took the matter under ad-Board of Viticulture was created and proc. Dr. J. J. Bloost devided with a modest fund to meet its u.e. ssary exp inditures

The numerous dates falong to this Board are fully entlined in the Organic Act, then a ercated and approved April 15th, 1880, and plarged in 1881, and which you will find in our First Annual Raport, on pages 5, 6, 7, 8.

Under this V table. State was divided in the Parameter (L,U,R) , ϕ s were vittle alt irall districts, a rich having a opresentative in the board appearted by the Governor, and chosen from except in no [1] Do I nik, G. prictically conversant with viticulture in | Biowers and this A Wit or its various branches and recognized in as Through the persistant efforts of a few en Their districts as suitable for the position of

Besides the Commissioners from these seven viticultural districts, there were to be appointed two extra Commissioners to represent the State at Lirge, thus forming a a President, a Vic. President, a Secretary, and a Chief Executive Health Officer. No salary was allowed any of the Commissioners or Officers, except the Chief Executive Officer, and the Sor tary, the rest of the Board's rving without compression.

It was understead that the Governor of mon, would choose that who were most about it to fill the post of honor without regord to so full position, Crosd or Politics, and though the term of three Governors have ended, this understanding has been

The original appointments were and the several Commissions signed by the

The following list comprises the officers and members of the Original Board of State

A rec-President Commissioner for the State at Large.

Treasure: Commission of oth Naga District

D. Turk ... Com for Son ma Dist Gorge West Con-L. J. R. Strander of r. L. s. Aug. les Dist G. G. Blambart, Com. for P.D. of Dist visement, and in March, 1880, the State I DeBarth Shorte Constant at Large Ches A. Weim r C. O. f. Tx . hiv. Vities turd and Hoods Office

Excention Charles A. W. St. F. G. and I D. Fark

Viditing 18 Feat South PRATIONAL SELECTION OF PRESENT

SEEDSCh II V

Arpad Haraszthy, Chas. A. Wetmore and Chas, Krug.

ON INSTAUCTION FOR THE OFFICE OF THE CHIEF EXECUTIVE VITICULTURAL OFFICER. Arpad Haraszthy, Chas. Krug I. DeTurk ON HORTICULTURE.

Geo. West, R. B. Blowers and J. DeBarth Shorb.

ON DISTILLATION, COUNTERFEITS AND ADULT-**EBATIONS**

The following are the only changes that have taken place among the Commissioners and Officers of the Board irrespective of the various Committees:

In 1881, John H. Wheeler became Secretary, in the place of Dr. J. J. Bleasdale.

In Feb. 1885, Chas. A. Wetmore was appointed Commissioner for the San Francisco District, vice Arpad Haraszthy resigned, and on the same date Arpad Haraszthy was appointed Commissioner for the State at Large, vice Chas, A. Wetmore resigned.

In 1887, Chas, A Wetmore resigned the position of Chief Executive Viticultural Officer, and was succeeded by our Secretary, John H. Wheeler. Clarence J. Wetmore was then appointed to the place of Secretary.

Later on in 1887, Dr. W. S. Manlove was appointed to the place formerly occupied by R. B. Blowers, representing the Sacramento Viticultural District.

The various Committees as then appointed were calculated to cover all ordinary contingencies that might arise, and but few changes have since taken place among

There has been no change in the position of President, Vice President and Treasurer.

For a better understanding of the important labors undertaken and accomplished by our Committees, I refer you to the First Annual Report of this Board, which you will find herewith transmitted, together with subsequent papers and Reports, eminating from the Commission.

The more important labors for the year 1880, as published in the First Annual Report, were as follows:

1st. Identification of the presence and habits of the phylloxera, and experiments made towards discovering a remedy to check its extension, and if possible resist its ravages and exterminate it. With this purpose in view, valuable translations were made from the French and other languages, containing instructions regarding the use of the various supposed Phylloxera remedies.

2nd. The securing and studying of the supposed Phylloxera resisting vines.

3rd. The grafting of the superior known varieties upon inferior varieties of vines.

4th. Rsisin making in Spain, with full and most valuable details.

5th. The study of the wild vines of Califorma, and their adaptability for making wine or producing roots to be grafted upon.

6th .- The study of fertilizers suitable to vineyards.

7th. Practical instructions in the ylanting of new vineyards, and selecting of proper varieties of grape for table use.

8th. Raisin curing, wine making, brandy distillation; I can say with some pride that the work of the year proved to be of the utmost benefit to all classes of vine growers.

The demand was so great among the public for the Report of the year, that the complete edition of about 3,000 volumns was almost immediately exhausted, and a second edition had to be printed to meet the demand

method with which it was carried on, was were exhibited and reported upon by duly so well appreciated by the succeeding Legis' appointed and thoroughly competent Comlature, that it organized a State Board of mittees. The result proved itself of the Horticultural Commission, under similar most satisfactory nature, but owing to a luck laws as those of this Board, and put the of funds in the State Printing Office; the same under the direction of the Viticultural proceedings of that Convention were only Commission to take charge of, together published through the enterprise of the ownwith the funds appropriated for its main-

This Horticultural Commission was super-J. DeBarth Shorb, Chas. Krag. Geo. West vised by our Board during the term of two years, and the result of their supervision tural Convention was held at Los Angeles proved itself satisfactory both to the Horti- which resulted in producing a marked imhowever, to the additional work thus thrown upon this Board, it appealed to the Legis varieties of grapes hitherto almost unknown lature to relieve them of the charge, and to that section. allow the Horticulturists to conduct their This was acceeded to at the following term of the Legislature.

> Commissioners, together with a report of the Chief Executive Officer.

The latters report consists mainly of experimental field work, grafting, fertilizing and observations made on the habits of the phylloxera. Following these papers, come a anmber of valuable translations made from recognized French authorities, and planting the vine in sand as guards against vines of America, instruction in the handreports on the results of the same. Follow ing this comes the Second Annual Report for reasons already mentioned. of the Committee on the phylloxera, vinepests, and diseases of the vine.

are now completely exhausted.

The third annual report of the Commis-Officer, and covers the years 1882, 1883 and 1854. This volumn you will also find will be found information of the most valuable kind regarding the developments of our viticultural industry, and the culture of the vine in California. A speculative essay on the varieties of grapes possibly for want of funds. adaptable to our climate and soil. General principles governing the vegetation, pruning, training, and cultivation of the vine, to which are joined elaborate illustrations. showing methods of the different operations. Then follows the Ampelegraphy of California. Diseases and pests of the vine, miscellaneous topics, translations, trenting of the culture of the vine En Chainties. with illustrations, translations showing the finally, translations describing and illustrating the various methods of grafting.

This volumn is one of the most useful, practical viticultural books, that has ever been printed in the English language.

In the year 1882 the Commission inaugated the First Viticultural Convention, and this proved to be the most effective method of gathering and disseminating just such knowledge as was required by the neophyte in vine planting, raisin coring, and winemaking.

The work of this Commission and the samples, raisins, wine and table grapes ers of the San Francisco Menchant, and through that medium became distributed throughout the State.

culturists and the public at large. Owing, provement in the manufacture of wines in likewise to the greater knowledge attained that District, through the introduction of

During the same year the Second Annual own Board, as they might think best. State Viticultural Convention was held in this city under an increased interest among the public and the vine growers generally. For the year 1851, I refer you to the Papers of value were read, discussions enprinted Report, also herewith transmitted, tered into, grapes, raisins, wine and bran consisting of the reports made by the several dies were exhibited, submitted to competent committees and faithfully reported upon.

Again owing to a lack of funds in the State Printers Department, the proceedings of that convention had to be turned over to private enterprise and the San Francisco MERCHANT took charge of the same, publishing the proceedings in its columns.

In the year 1884 a District Viticultural consist of treatise on submersion of and Convention was held in Fresno and raisin curing was given the post of honor. Then the phylloxera. Various methods of came irrigation drainage, proper varieties prooing and cultivation of the vine. Char- of grapes, insecticides, and the making acteristics of the principle species of wild and storage of wine in hot climates. A vines, studies and observations on the wild marked interest was shown in the topics under consideration, and much practical ling of insetisides, dangerous to the vine, knowledge acquired. The proceedings were published in the San Francisco MERCHANT

In the same year, the Third Annual Viticultural Convention was held in this City, Owing to the demands of an appreciative similar in tenor to those previously held public, both additions of the above volumus, and you will find joined herewith, a full report of that Convention, which was again printed in the San Francisco MERCHANT sion is contained in the Second Annual for want of an adequate appropriation in Report of the Chief Executive Viticultural State Printers office. At that Convention about 400 samples of wine and brandy were exhibited, coming from nearly every wine in the collection sent you. In this report district in the State, besides many samples of raisins and table grapes,

The Fourth State Viticultural Convention was also held in this city and likewise published in the San Francisco MERCHANT,

In 1886, our funds having been exhausted in our endeaver to pass a National Pure Wine Bill, the conduction of our Convention was turned over to the Grape Growers and Wine Makers Association, and held in this city under their auspices in March, 1887. A copy of the proceedings you will find transmitted with this Report.

The Sixth Annual Convention was held in the beginning of March of this year, culture of the vine in the Gironde; and and if possible proved itself even more popular, and more satisfactory than any of its predicessors, there being a larger attendance and a larger number of wine and brandy samples exhibited. Thus clearly proving the recognized value of these Conventions, and their growing appreciation ly the vine growers at large; and I may here state I know of nothing so condusive towards the rapid improvement in quality of our viticultural productions as the holding of such Conventions,-the reading of papers from practical and experienced men, and a Many valuable papers were read at the considerate discussion of the merits of the Convention, and a large number of wine subjects presented. At all Conventions,

more or less machinery and viticultural implements have been exhibited, and closer attention drawn to the value of numerous new methods and new appliances for tha pressing of wine, the crushing of grapes, the grafting of vines, the tilling of the soil and devices for perfecting the packing of raisins.

Reports of the various Committees on wines tasted during the last Convention, were unanimous in the acknowledgment of their marked improvement in quality over In the following year a District Viticul- those of previous years, attributing the improvement not only to the better management in the fermentation of the wines, but in the selection of proper varieties of grapes for certain localities, planted with due regard to exposure, soil and climate.

To further demonstrate the extent of the work accomplished by the Commission, I herewith add a hurridly collected index of original papers, written on various Viticultural subjects, by the Officers and members of this Board, as well as those written by others at a solicitation of the Commission, and have indicated where these papers were printed and can be found. It is with a sense of pride that I point to these practical papers on the various branches of Viticultare, and invite any other wine country to show a single one of its Institutions that has accomplished more in the same period of time.

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TREATMENT OF THE VINE DURING ALGERATION.

In continuation of the article on the subject commenced in last issue of the MER CHANT, we find that ten men can in one day fix 10,000 metres of straw mattingthat is to say, cover in and protect a lice tare. Guyot succeeded in causing ten men to protect 70,000 metres in six days. The straw mats remain in this position to the end of May. From the 30th of May to the 5th or 10th of July they are raised so as to form an angle of 60° with the horizon, being always open towards the east and south, and closed towards the north and west. The rods of the vine grow up along the main stake, and the little earth wall behind the vine is being diminished by means of the hoe to about one-third of the original beight. All the shoots of the fruit branch are pinched, while the wood branches of course are not pinched.

During the stage in which the vine has to be protected by straw mats to save the blossoms from destruction by cold and rain, and during the following or third period-from the 10th of July to the 10th or 30th of September, according to the weather-the mats are fixed perpendicuharly to the north and west of the vines It is estimated by Guyet and Constant Charmens that this precaution alone will advance the maturity of the vine at least a week. The straw mats now act as little walls, against which the grapes ripen, and if they are blue become dark. Lastly, in the fourth period-the end of the seasonin order to protect the blaves from early frosts, and the grapes from rotteness by rain, the straw mat is fixed almost horizontally over the bearing part of the vine. and acts in fact as an umbrella against, the rain and cold, or intercepts radiation as a screen. These four changes require four operations, which cost 100 francs, including the bringing in and taking away of the straw mats under circumstances in which the wages of a man are two franks for ten hours. Ten men will unroll and fix the straw mats required for a hectare as above stated. The intermediate manoeuvres of lifting, changing position and so forth, require less time than the first operation On an average the straw mats last four francs or 3300 francs per hectare.

Guyot protected 62,500 metres of vines by means of straw mats. These occupied five hectures by the side of twenty-nine of Experimental Termentations made in thectares, which had been protected against early frosts in spring in various ways; but none was as successful as the protection by straw mats. In 1857 this vineyard in the neighborhood of Sillery was full of blossoms in all its parts-the twenty nine bectures not protected by straw mats equally with the other five hectures; but during blossoming time the hectares with the mats did not shed their blossoms, and they produced from thirty to forty pieces-say thirty-five pieces-of two hectolitres each. while the twenty-nine bectares without the straw mats gave from ten to twenty pieces only, or in the main fifteen pieces per bectare. The cold during the blossoming time had therefore caused from fifty to sixty per cent of the grapes to disappear, although six hectares had been protected by pine branches, six by marsh hay, and by straw hung upon the vines. In the neighborhood some viticulturalists had protected their vines by canvas. This also had afforded no protection, and their vintage did not rise above ten, or twenty, or thirty pieces per hectare.

> The matters here stated are by no means mere assertions; but they have been proved by frequent visits of committees appointed by the viticulturalists of Rheiros and Chalons, and reports of these committees have been published by the engineers Dugue and Bencelin in the Cultivateur de la Champage for November 1856 and March 1858

Guyot hardly claims any originality in this matter, for he says he has simply endeavored to cause viticulture to profit by the experience of specialists. He says it is only necessary to open the works of Dubrenil to see the trellises and counter-trellises of Constant Charmenx at Thomery, and to see the effects of straw mats, on the peach cultivation at Montreuil, in order to perceive that he had only profited by their experience and their lessons. In 1858, Charmens went so far as to cover all his lines of trellis with such straw mats in from getting so cold that it will deposit order to protect them against rain and cold. We can see that a process may be economical for grosser cultivation; vet w have no doubt that if this mode of cultivation were undertaken with all the precantions we have indicated, it would every where effect a great improvement in the product, a saving of labor, and a great increase in the harvest.

MODE IN WHICH THE VINE IS TOUCHED BY EARLY SPHING PROSTS.

Many are the surmises which ignorant persons have formed on this subject, and as the evidence of frost upon the young shoots begin first to show itself when the sun rises, the idea has been most common among them that it was the rising sun which killed the shoots. Of course the sun has nothing to do with it. This any peryears. Their paner ought not to exceed 15 son conversant with physics could demoncentimes the running metre. This, there-strate a priori; but it is well that in matters fore, would be 400 francs per bectare per of this importance there should be distinct year; at present they cost 20 centimes, experiments to appeal to as evidence. All which brings the total expense per hectare the lines of the vine-yard of thirty-four to 600 francs, which is somewhat too dear, bectars which Guyot planted at Sillery in In cases where the vintage is worth 30 1850 ran from north to south. In cousefrancs the hectolitre, and an increase over quence the greater part of his straw mats, the ordinary production is attained by the which were then 59,000 metres, opened tostraw mats, an advantage begins to be pos- wards the east, and received the first action sible; but where in the tine vineyards the of the rising sun. In the night from the bectolitre is worth 50 or 100 francs, an 4th to the 5th of May, 1856, and in that extra production of thirty hectolities will of from the 6th to the 7th, a frost of three and course leave the profits at 300 frames, 1500 and four degress struck all the vineyards of the Champagne, and particularly those of

Sillery. On the evening of the 4th Guyot, alarmed at the cold, clear aspect of the sky, had caused 300 metres of straw mass to be got ready, and had given orders that if there should be frost in the night those 300 metres of mats should, before daybreak, be out to the east of vines not otherwise protected. These vines were therefore destined to share all the intemperateness of the night, but not to be struck by the early sun. The instructions were obeyed; the sun rose splendidly, and at ten o'clock in the morning the disaster was evident to all eyes. All the shoots protected by the straw mats against the rising sun had perished, just as well as those which had not been protected at all; and it has been demonstrated that the rising sun had nothing to do with the shrivelling, dying, and browning off of the frosted vine shoots. In the night between the 6th and the 7th the same experience was repeated in other parts of the vine vard, where a number of rows had escaped the first night unburt. The snn-shades did not save a single shoot. But, say others, "It is the cold wind that kills the shoots." On the contrary, say we, the cold winds such as blow about this time will never effect the young shoots, unless there be previously deposited moisture on the shoot sufficient to make it defenseless. Now, what causes this deposition of moisture? The radiation of its warmth towards the sky so reduces its temperature that the moisture which rises from the ground is deposited upon it, and then the wind comes and the shoot, which is defenseless against the effects of evaporation, perishes. It is therefore clear that the cold wind alone has no effect upon the shoot, except in the case when the shoot has previously lost heat by radiation, and had moisture deposited upon it. The dry shoot is protected against wind by the fine fur which covers it on all sides, and which to a teleologist might appear to be expressly made for protecting it against frost. Well, then, prevent the radiation from the vine towards the sky by means of straw mats; you thereby prevent your vine moisture, and the wind will then only contribute to keep it all the drier, and insure its preservation rather than its destruction. The vine in clear spring nights dies from radiation, as all the camels died in Bruce's caravan, in the midst of Sahara, under the clearest sky that he ever beheld on his journeys-from radiation of heat into

CALIFORNIA'S CULTIVATED LAND

The annual meteorological review of the State Agricultural Society gives the following interesting statistics in regard to the land subject to cultivation in California Plain land, 4,000,000; footbills proper, 4,500,000: upper footbills, 4,000,000; mountains between 1,000 and 2,000 feet elevation, 6,000,000, making the total average of the land described 18,500,000 acres, cherry ripens at Vacaville, about twenty miles sonthwest of Sacramento, and in the footbills of the Sierra, to the east and north, as early as the last of March, the apricot by April 20th and the peach by May 1st. Tomato vines are frequently green and growing the entire winter, and grapes have remained on the vines in palatable condition until late in January. The estimates above given have been recently compiled, and are thought to be as reliable as round numbers can be.

Subscribe for the MERCHANT.

VINEYARDS IN SAN BENTTO

In a few years San Benito county will be covered with vineyards, said Mr J. Bolado a prominent vine grower, to a Hollister Free Lance reporter who spoke to him recently on the subject of vineyard planting in this county. Mr. Foludo states, without fear of contradiction, that the California wines of to-day are equal and in many respects superior to the imported wines that sell at much higher figures. San Benito county is better adapted to-day for viticulture so far as soil and climate are concerned than very many sections of the State that are noted for their extensive vineyards. Mr. Bolado advises every farmer who wants to make money to plant vineyards as soon as possible. The process of wine making is very simple, and if the small vineyardist does not want to manufacture wine himself there will be plenty of demand for his fruit as soon as it ripens. Mr. Bolado states that vines begin to bear in three years, and come into full hearing in four; that each vine is estimated to produce grapes that will yield balf a gallon of wine, or counting 680 vines to the acre, each acre will yield 340 gallons of wine that will sell readily at 35 cents a gallon, or \$119 to the acre. Mr. Bolado planted about 201, acres to vines this Sring at a cost, including price of cuttings, of \$18 per acre. The varieties he planted were as follows: Cabernet, 4,000; Pinot, 2,000; Mataro, 2,000; Zinfandel, 2 000; Chasselas, 1,000; Riesting, 1,000; Muscat of Alexandria, 1,000; Malbec, 1,000, These vines are all doing well and growing rapidly. Mr. Bolado now has a vineyard of 30,000 vines, and will increase its capacity year by year.

BLESSINGS IN DISCUISE.

The Real Estate Circular, published in this city by Thomas Magee, in the following paragraph illustrates from a practical standpoint the adage, 'tis an ill wind blows no one good.

"All of the advertising and all of the favorable articles and letters ever written about California have not, in adding population to this State, been of as great value as Atlantic blizzards this Winter. They have been a perfect whoop up for California, Nearly every State north of Virginia has had the blizzards, too, this Winter Starting from their natural home in Dakota, Nebraska, Minnesota and Wisconsin, they have traveled nearly everywhere, finally winding up with a roarer of true blizzard wind and snow in New Nork city itself, where all traffic, whether by locomotive, elevated railroad, horse cars, highwaymen-hackmen or on foot, was alike suspended for fortyeight hours. Every one of these bhzzards was a perfect besom of advertising in sweeping people to California. Never was there a better illustration of the truth of the proverb, that it is an ill wind that blows nobody good. And, indeed, we honestly believe that these blizzards were a blessingn gennine, an almost unadulterated blessing -to those who were induced by them to pull up old home and badly frozen stakes and come to California. We verily ladieve that this is the promised land for the working man, no less than for the man of means It is also our belief that this fact will become more and more plain to the world for the next seven to ten years. Progress such as we have never before dreamed of will, we believe, within that time be made in all departments of buman industry all over this coast."

THE GRAPE VINE HOPPER.

The $4 - \epsilon \varphi \circ \mathcal{T}st$ pulsashes the following remarks on this insect, which were much by I. A. Linting to the Missis, as it's State Bould of Agriculture, which will be materesting in comperior with the resembles of of Mr. Wheeley, Chaif Vita altin Officer

Trapent complaints are made of the daming don on trapexings, train an ittack of a then I ave a done by "Thirps," This is a popular name that an incorrect one, as will be shown hereafter which has planned wid spr. id currency among vite go wars for some small about an eighth of an inch lengt, slanda, spando shaped, partially colored I at-hoppers, which are very distinctive to the foliage of grapeymes. They abound up in the leaves in their three stages of lava, pupi, and perfeet insect, in each of which they are inprices. Then inputy to the leaves is caused by pain tuning then, with their beak or problems and feeding upon the sap-They are us rady to be a cond on the und r surface of the Layes. The punctures first produce small col red spots, which are multipli dover the states, and rapidly increase in size by their running together and by the grater's ctorr I power of the growing insect. Later they become long brown blotch's, which, if the misests are numerous, extend over and embrace the entire leaf, causing it to shy, appearing as if searched by fir , to do and fall from the vine. As a consequence of this partial detailation, the sput is dwarfted and its ripening nat rf to I with, and the death of the vine may follow if the insects have been very man, i. de . These little creatures belong to the order of HEMILTHERY, which embraces a large number of our destructive pests, as the position of Parkday, the scale-invets and the incidylogs of wealth the graps Phylloxera, etc., all of which subsist only men highly field, but fully upual to districtiveness those provided

with formulable bring jaws. Say rai sport softh sale religious are from they are charted up in the grap beaves They belong to the genus known as F(y,b) = roy and the more common one is that d scribed by Dr. Harris in 1831, as Territor a redis. It is about one-tenth of an meh long, of a pale y llow or straw color, with two mariow red lines on its head, and scarbit brinds upon its thorax and wing-covers. It app are in June, in its larval stag , when it may be found quetly resumg upon the leaves, with its back thrust ther in unless it be disturbed, when it hops birsky to another had. They east their skins from time, to time, as they there are in size, and numbers of these white, empty cases may be fastened to the under surface of the tomage in scatter don the ground beneath. In July they assume pupal form. In August they mature and nequire wings, when, if the vines are shaken, they may be driven up in swarms, but only to beturn and resume their destructive work. The wing damsects survive the wint r. habermating among the dead leaves or in other sequestered places. The following spring, in the month of May, it comes forth from its retreat, and deposits its eggs upon the blaves of the vines for another brood.

The Their proper is an entirely different msect. It is a smaller insect than the graps vine bod hepper, with long and nar-

been the occasion of much distrision and the season, while yet in its larveis still in aboubt. By itfulliday it was set benefit has be inderived from showers up rt ma distinct order, under the name of Thy-anormers, and this aromement has been accepted by many automolecusts. Dr. Packard and there regard it as proponly placed among the HEMILIFIA, to some of the families of which it seems to have a close afficity. Their habits vary are stly. for while many of the species ire unopiestroughly vegetable feeders, and injurious in their perations, others, from their cumyou as propensates, are service able in their distinction of gallons ets, the eggs of the surenlie, the red spids is Terror get in territors the classressed midge toold my a bay a code , the wheat midge ($D(\rho^T)sis\ tritlet$, and oth ransert pests

The in thod commonly r stored to for the prevention of the rayages of the socalled "Thrips" in graperies, has been furnigated with burned tobacco. This has provid to be partially successful A still better method has been for some time employed in France, but not to my knowledge to any extent in this country One who has thoroughly test d it lears this testimany to its efficacy of Ever sine I adopted it, it has been absolutely unpossible to find a "thrips" in my houses. and other insects have likewise disappeared. the following in thod of use is given. -

Every week, whether there are insects or not, I have a number of braziers containing burning char oal distribut d through my house. On each brazier is placed an old sane-pan containing about a pint of tobacco pure, of the strongth of 11 degrees. This is quickly vaporized, and the atmosphere of the house is saturated with the nicotineladen vaper, which becomes condensed on everything with which it comes in contact When the contents of the saucepan are reduced to the consistency of thick simp. about a pint of water is added to each, and the vaporization goes on as before. I consider a pint of tobacco june suffice at for a house of about 2,000 cable feet. The smell is not so unideasant as that from fumigation, and tobacco pure can be used more conveniently than the leaves.

When the operation is completed, if the tongue is applied to a 1 of one can easily understand what has taken place, from the very perceptable tasts of tobacco.

The process requires to be repeated in proportion to the extent to which a house is infested. Such troublesome guests are not to be quite externumated by a single operation. A new brood may be hatched on the following day or some may not have han read at on the first day, so that the vaporization to frequently carried on, until the insects have entirely disappeared, and after that it should be repeated every week in order to prevent a fresh invasion.

The robacco pure of the proper stougth is pur hisable at the tobacco fectories in Trine for about fift in earls of our would be but about twenty-five cents a week tor a grapery of about fifty feet by sixteen. aml ten.

shows. It might be propored in quantity and evaporated to the proper digite, for | convenience of keeping and for polyuse.

Although the so called things at might properly be designated the figraps vite leafrow wings, without veins, and bendered hopper's more abundant within the entirely by the day in wich at the V. M. with long fringes, the two pairs of about shifter of grapheres than downless, still in. They were into a force of a large equal size. There are a number of species favorable sensors and certain localities, it were part city space. The way was a life of the control of

united in the family of Théodae, the location of which, in our classification, has amounted to reme hid measures. I A still more off child application should be spraying with in small ran at her a to be and commen scap, made after the formulgiven for its preparation, and distributed in constlike spray by mains of a vilore [h. Nisson nozzb

Another method has been used for defend streamer this moset, with good or allo it is stated. A long strip of building-paper it smort dewith condition on the side, and stretched between the rows, when, with brush, the insects are driven up or a like is a wind wines against the sticky surface, to which and section with the control of the control o brush, the miscets are driven up from the they adhere. The men and a boy can be over a vineyard in this manner in a short [1,12,25] time, and a few repetitions will in july ex-

A correspondent in Middlehope, Uning Co, X. Y, to whom the above remedy was saggested as perhaps the lest way of meeting the myriads of the insects which were infesting his vines in larger numbers than ever befor , subsequently wrete me that he had followed the a commendation, and that it had operated very successfully.

Att course this method will only provofficitive late in the season when the insect has acquired its wings.

PRINTING IN CHINA.

A correspondent of the Norther hand thang Vers of Shanghar, describes a printing establishment which he found in a village in the interior, about 150 miles from Shang hai. The printing was being temporarily carried on in the village builds, and mossable type only was used. In the large central half of the temple were placed about twenty ordinary square tables, on which the cases of type were spread out, very much after the Loglish method. At the time of the visit one man was engaged in setting aptype, another was printing. The fermer stend before a table, on which was what may be called a Chinese tease ". It was a solul block of hard wood, about 22 in Jong by 15 in, broad, and perhaps 3 in, deep. The inside was hollowed out to a lepth of about a quarter of an meb, this depression | turn 1 | such 2001 | the 100 dig state of the being still further hollowed out into grooves, about three-quarters of an inch deep. The block had twenty-nine of these grooves. each filled to the depth of a quarter of an meh with ordinary stiff clay. With his cope before him, armed with a small pair of iron pricers, the compositor began his work character after character was transferred from the case and firmly pressed into the clay. When the "form" was complete, a had back that board was placed on the top and the archieve of the lower charactus pressed perfectly even and level of the wine for the conwith the parties of the wood in block, the ashed death tragenerally former round every than so promoney a quart. Its expense, at this rate. The printer now received the form of I an fiely brushed his interver D. 194 I should be the sum of the style of the second of the second seco I demonstrate the property of the second sec and ten.

A strong infusion of t bacco leaves, under the by boiling, would be a substitute for the boundary would be a substitute for t mights. The type in the following fothers. More

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THE DESTRUCTION OF ANIMAL AND VEGETABLE PARASITES OF THE VINE.

RECOMMENDATIONS BY THE CHIEF EXECUTIVE OFFICER OF THE STATE VITICILIURAL COMMISSIONERS

A Resume of Rules and Remedies Adopted to the Present Season

The present b ing the season of greatest activity in the operation of combatting vineyard pests and diseases, many of which appear so suddenly in some of our vineyards as to leave no time for the proprietor to waste in looking up the results of former experiments or remedies described in some last paper or publication. It has seemed a fitting time to publish a brief abstract or summary of the principal remedies abroad at the present moment, together with the best known means of destroying them.

CUT-WOUMS

May, if few in number, be found at night with the aid of a lantern when they are preying on the leaves or young shoots. Another method is to dig them out of their hiding places near the roots of the infested plant in the day time, as they retreat with the disappearance of daylight just below the surface of the ground,

If in sufficient numbers to warrant. spray the vine with a solution of Paris green (which must be agitated continnously while using to prevent settling), one pound to 150 gallons of water. This will not harm the fruit or plant, even though the grapes have attained half the size of a pea. If it is feared that livestock may get to the folisge and thereby become poisoned; apply the same solution to cabbage leaves which if placed near the troubled vines will attract the attention of cut worms and destroy them. Afterwards these cabbage leaves may be picked up and destroyed, or left to wither without danger,

To apply the Paris green solution use any good spray pump, or even a syringe will answer for operations on a small scale

SPHYNY MOTH OR AEMY WORM

As sometimes improperly called. Spray with Paris green as above, using one pound to 150 gallons of water. Treat particularly well the outside rows of the vineyard and they will never get further than these. If only a few infest the vines they may be hunted on the foliage and destroyed by hand.

GRASSHOPPERS.

This plague has been successfully met by the use of arsenic and bran remedy, prepared as follows:

Forty pounds bran, 15 pounds middlings 2 gallons cheap syrup, 20 pounds aresenic, mixed soft with water; a tablespoonful thrown by the side of each vine or tree: cost per acre for trees, 25 cents, for vines, 50 cents.

If placed on shingles about the vineyards much of the poison may be atterwards gathered up and saved.

Complete success has resulted from the nse of this remedy, as the grasshoppers eat it greedily and die in their tracks

For this may be substituted with equal effect the Paris green spray, applied as for cut worms.

cylinders framed with band iron and covred with window ganze, these hinged together on one side should be provided each with a semi-circular pan for a bottom, so arranged that the whole may be closed about the vine. Rub the gauze over with a rag saturated with coal oil and place a litte also in the pan at the bottom, then when the whole is closed about the plant kick the stump of the vine or disturb the foliage by introducing the hand or a stick from the top, and the ins ets fly to the pauze where contact with the coal oil destroys them. For full particulars regarding the construction of and method of operating this trap, see second appendix to Report of Chief Executive Officer for 1888.

Thripe cannot be poisoned on the vine as they subsist on the sap alone which is sucked from the leaves, thus causing them to wither and dry up.

THE FLEA BEATLE

And others of this class which consume the foliage of the plant, giving to the leaves a riddled appearance, may be trapped also with the above named contrivance, for commonly any slight disturbance causes them to drop to the ground where they secrete themselves

A better method, however, where circumstances will permit, is to spray the vines with the Paris green solution described

THE FALSE CHINCH DUG

Is of a grayish-brown color with pupa of about the same color. Both are when full grown about one-eighth of an inch in length. They appear occasionally in spots in the vineyard, infesting such vines in great numbers and consuming the leaves. They fall to the ground when the vine is disturbed, where they are scarcely visible, They have caused our vineyardists no serious damage as they disappear after a short season, and have not at any time in the past become general. They may be easily caught with the gauze trap and kerosene, or may be poisoned by the Paris green

HARES, RABBITS AND SUIRRELS

Have been a constant menace to young plantations made in new districts. A tight fence affords the most perfect immunity from their attacks. Squirrels may be kept out by making a tight fence along the side of their approach. They will not travel far to go around this, unless the place is very much isolated, because of their fear of dogs, hawks and other natural enemies.

Hares which come a long way to devour the vines will be noticed to confine their attacks to a few vines at different places in the vineyard which they eat down as regularly as the new growth appears. A weak solution of asafoetidy prepared by dissolving in alcohol and then adding water, have been applied to the afflicted vines with good success.

These animals will also be destroyed by the Paris green solution if applied frequently during the early growing sesson. VEGETABLE PARASITES -OIDIUM OR POWDERY

MILDEW

May be best prevented or removed by using sulphur which should be applied. First when the vine is in tall bloom, being careful to dust or blow it well over the flowers. Repeat the dose about the middle of Jane. and later again if any sign of the disease appears.

If for table grapes, the sulphuring may be continued monthly until they begin to Are best trapped by means of two semi- change color. Salphuring should, how- ing worthily followed up in California vine-

the herry has attained two-thirds its fulgrowth, as by so doing it reaches the wine and gives it a bad odor.

Let it be remembered that the disease be gins its development where the average of day and night runs up to 52° F.; it spreads rapidly at 70° F., and 'is checked in itgrowth where the thermometer indicates near 100° F. Above 100° its damage is rapidly diminished, and at 112°-a temperature quite common throughout the interior vineward districts of California-the germs loose their vitality and the effects of the disease entirely cease.

The sulphur used may be either finely ground or sublimed, the former is most commonly employed as it is cheaper and answers the purpose equally well should be applied so as to lodge as much as possible on and near the growing partof the vine. This secures a deus · sulphu vapor in direct contact with the diseased organs. Sulphur on the old stump, or ever on the surface of the ground will destroy the odium, but a larger quantity would be

COLLUBE

Though not itself a direct disease results from other evils. It is, in a measure, prevented by sulphuring at the time of blo soming, when oidinm which would other wise interfere with the fertilization of the flower, is removed. This is not always a cure, however, as other causes exist for the evil, principally sudden changes in weather, either hot and dry or cool.

The most successful treatment for the trouble when so occasioned results in pincage, the process of pincing off the ends of the fruit bearing shoots when flourings begin. Also, the annular incision may be adopted, which consists in ringing out with an appropriate tool a band on the outer bank on the fruit bearing cane or shoot just below the point where the bunch stem joins the shoot. Nipping off the end of the long bunches will also aid in keeping the remaining fruit on: and cause it to ripen large and full.

The foregoing disposes of those enemie most common to our vineyards in the past with the exception of the phylloxera, which though most formidable of all, has been discoursed on at sufficient length before.

J. H. WHEELER. Chief Executive Viticultural Officer.

CALIFORNIA WINES.

F. Pohndorff, writing in Bontort's on the subject of our California wines, says: There were tested at the late California State Viticultural Convention in San Francisco, 394 samples of wine.

Although a member of the committee for the examination of white wines, the writer could give only two mornings of his time to that task; but he had opportunities of obtaining some impressions from the wines generally.

These impressions were a confirmation of his belief in the constant improvement of California growths. Without a good raw material no product of merit can be manufactured. Thus it is that the varieties of vines in California vineyards generally are to-day of so much higher grade then they were but five or six years ago, when the balk of the vineyard stock was still the Mission plant, that by comparison the old wines would appear to bail from quite a different region.

The models of old world growths are be-

ever, never be done to wine grapes after vards and clears. The avvestigation in high class vines from Europe prove remunerative. In a few years our selfars will contain matured wines made from their fruit. and these wines will justify the hope that even middle grades of good exotic siginals can be matched by our home products.

> As regards varieties from which wines of good standards are now obtained, we find! the Rieslings, Traminer and Gutedel (Chase selas), the Santernea varieties, and the Spanish Palomino and the Portuguese Boal well adapted for the different types of white wines. As to red wines, the excellence of some grown in favored localities where the Zinfandel is reliable, reconciles to that variety those who judged of the great bulk of it as rather ordinary. Several matches of other grapes with the Zinfandel are progressive successes. The Cabernets, Merlot. Verdot and Malbeck, of Bordelaia origin, tre really grand adaptions in California vineyards. Beclan, Crabb's Black Burgundy, Tannat, Tronsseau, Carignan, Monleuse and Syrrah, are worthy acclimatizaions that will do much towards elevating he California clarets high above the past nd present level of the ordinary (and in uany cases, frightfully ordinary) trade

Palomino, Boal, West's Prolific, and one or two others, confirm their supposed useulness for sherry character wines, and two or three of the Muscat family yield creditable liquenr wines, for which however, some age and maturity is as indisputable requirement, just as only the best rectified grape spirit should be the fortified medium in Tokay and Muscatel wines. For pent, Crabb's Black Burgundy, according to the writer's judgment, is one of the safest and most salutary grapes. Faded color in ports only two or three years old, is a defect; freshness, fine astringency and moderate lusciousness, with generosity of its etherousexpression, must accompany a good ruby tint in a port a few years old. The grape mentioned fulfils all these conditions in a port better than any others used for the purpose,

The best brandies of some age submitted to the test were distilled by G. West, H. W. Crabb, and the Napa Valley Wine Co. These brandies owe the valuable qualities which gained for them in testing such high and well deserved appreciation, to the good grape varieties that furnish the wines from which they are distilled. West's Prolific. Folle Blanche, and some other light white varieties will produce brandies of high quality, brought out after being mellowed. by age. The difficulty is in their preservation. Very little high class brandy can asyet be made, as demand for it is so large. as to prevent their attaining any great age.

THE Western Broker says: The most valuable vineyards in France occupy land. which in England or in the United States would be considered almost worthless. The soil is thin, sandy and pebbly, and sometimes exposed to drought, yet the vines flourish upon it to such an extent, that the land is worth from five hundred to three thousand dollars an acre. An effort is to be made to ascertain the scientific reasons why vines flourishes so thriftily on such soil in France, with a view of ascertaining if land of similar quality in this country, which is now comparatively worthless, cannot be made correspondingly productive and valuable.

Subscribe for THE MEBCHANT.

vines or on the ground, would spread the

discase when favorable conditions arrived.

Prof. F. Lawson Scribner of the Agricul-

tural Department, who has made these mat-

ters a special study, spoke on them at the

anunal meeting of the New Jersey State

Horticultural Society in December last

H- stated that he found the mature or

Physicspora form of the figures of the

black rot in the fallen b rm s of the List

d nee gathered there and in California, he

is of the opinion that the Grapes ent spot

disease Physics out labour is identical

with I'b ma I loo a, or black rot. Tu-

appearance of the disense upon the leaves

asuaby precedes by about two weeks that

upon the fruit. In regard to the vitality

of the spores of this black ret, he stated

that he gathered some berries Jane 14th

that had been destroyed by Wack rat the

year privious, and kept them through the summer in a cigar box. Just before the meeting he moist-ned them and in twenty-

ating in great numbers, showing they had retained their vitality for a year and a half.

According to these statements, the time

for preventive applications is when the

till us at what period and muler what cir-comstances the discase meet flourishes and

probably warm, and moist can be but little death.

there can be but littly dealer. We happened grape growers will be watchful the

spreads on adjacent vines.

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THE BLACK ROT

In a recent issue of the Country Gold count. is a communication from Mr. H. I dricks of Ulster county on grape rot, which we copy as follows:

In r sponse to your requests for the facts: and information bearing upon the exist neeand spread of the black rot of the grape in the Hudson River valley, I may say that there some to be nonminent danger from this districtive disease in this region as year's er quiwhile at Vitorand. From eviv.t. Recent statements to the contrary which have appeared in a few of the River papers were entirely new to many graygrowers, and I am unable to verify such reports, either by their evidence or from nevown observation.

Mr. A. J. Caywood, the v-teran grape hybridizer and grower of Marlboro, who is. perhaps, one of the most intelligent and observant grape men in this region, says that there was no rot noticeable in this section last year: "We had quite an attack of it three years ago, but v ry little the last four hours be found the spores were g rmin two years, and less last year than the year before." His belief is that the grape rot is not e ntagious, and he cites this deer as of the malady here spoken of in proof. He first indications of disease app ar on the baf. It remains for our scientists yet to has tried in every way to innoculate sound grapes with the disease, pricking it in with needles, and saturating whole clusters with mashed rotton grapes, but never such a period under favorable circumstan succeeded in imparting the disease in a single instance. He thinks that like the pear blight, the true cause of this disease is not yet fully understood.

I cannot learn that any preventive measures have so far been taken in this region. The damage being so slight from the rot, and the diway being on the decrease apparently here, little slarm is felt

Mr. Caywood thinks some varieties are almost exempt from the attack of this fun gus. But where the disease prevails extensively I am inclined to think that few varieties will escape. He regards Concordas among those least hable to damage from this rot. Three years ago, when the ro was the worst here, some fifty varieties suffered considerably, while the Concord wa only very slightly effected. The fact tha Concord, more than all other grapes pu together, is grown along the river, probably led to the statement that this variety seems most susceptible to the black rot, as i would thus be noticed more in that variety

Whether this disease be contagious of not it would seem that wherever it is found to prevail to any extent the vineyarlis would be wise to adopt precautionary measares promptly and presistently. Gathe and burn or destroy all rotten grapes, falle: leaves and trimmings. Run no risks with the "winter spores" of Phones, Uncinals or any other species of the infamous myer logic brood. It would not do to compos this stuff-that only facilitates the diseaseburn it. That the attack is upon the sur face of the fruit woms clear from the face that bagging prevents the rot.

Communicating on this the Orang County Farmer says. The advice given by Mr. Hendricks is othodox and should b carried out faithfully by every grape grower "Gather and burn all rotten grap's and leaves" that is the only prodent course Mr. Caywood is possibly cornect in his view that the black rot is not contagious, but hi opinion is apt to be misleading and result in danger. While it may be and doubtless s true that the disease may not be communicable by contact in the manner discribed, we think it equally true that the infected grapes, if allowed to remain on the PURE WINE AS ALCOHOL

A fair siz d audience greated Mrs. Dr. 1. Potts at Irving Hall this week. The gift 100 book in which ho introduces one biblical Quakeress britily described the various ergains of digestion and the function of each one are interchibits must. In souther has She speke of the input is all as if also taken it of standing for rid a temperate holic drinks. At is alcoh . ' she sail twhich stimulates and which courses also process win so Showing from tiblical ausire for fermented liquids. The man while, only, and roth the Clandrow dispendrinks or has been on a spreading state of the distribution of form to to all since on the following morning to core the alhol has precipitated the person from the gastringues of the st much and the wat r to a certain extens, r. less does it. Alsolit junders our was greatly in 516 form its coagulates or thickens the albumen of the blood and this close the circulation of the standing which, his present was visibly weakest points, hence the relinion of the drunkard. Alcohol irritates, inflames and the services - and at I with His worship in finally ulcerabe the stomach, and the great this temple, an entries quantity of wine symp. ★ tip nerse which governs the st.m. was employed at the direct command of the ach is similarly diseased and it o minimi. Almighty, and for this purp so there was dates the off of to the brain and discipling quough of the product is it verage stored to mens ensues." She declared Germany within the precincts to have made a modern to be the most temperate country she had wine more land only us of such a stock. visited. The temperance there is In t. the national boverage beer, which conturns the smallest p routing of alcohol.

The United States is next in trier, and the people of California are the most temperate, b cause, as the speaker sail, of the pure wines consumed here

The lecture was a scholarly effort, marked by occasional flights if eloquence and pointed anecdotes. Mrs. Potts I ctures t coming season and let us hear the result of women this afternoon and to men and women to enight

THE BIBLE ON PROHIBITION

The Rev I R Sykes f Olive has written argum its about tel to listurb the rest of is fire that rack a bearages, esto be lightly not common being G. Thomself, win is to floringst It into as gifts, that exactly great tample distriction to the traffic in wine, in twithmanifests has the Holy of House whilst in Whilst under the n w dist meation the Savi or all his fill c a rs use I, and sance thind its is said from beginning to end of the said I scripture there is nothing condomnatory fithe in I rate us of wine. The author charges the with dictating to the Creator what he ish all have done

and what he should have befrom lone, who try to prove from the bible that prohibition is authorized, and demonstrates that under the running of molern prohibitionists, the R bomer hims if would not have been egglibot where home homeometric in a modern

Christian organizati n.

EAST BOUND THROUGH FREIGHT.

Forwarded by the Southern Pacific Co., April 1888.

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Country Board Wanted.

A family in the city desiring to spend a few weeks in the country wish to find accommodations with some private family on a farm, within easy distance of a line of railroad. Address X, this office stating location, terms, etc.

GOVERNOE WATERMAN, for some reason best known to himself or his man Friday aaw fit lately in his good pleasure to alter the complexion of the Viticultural Commission. Mr. Haraszthy was removed from the presidency, an office which he has filled to the satisfaction of the largebody of viticulturalists in the State for over twelve years, M. M. Estee being appointed in his place. The latter gentleman, for reasons which it is said are not altogether favorable to some of the future political aspirations of the Waterman-Boruck, or Boruck-Waterman syndicate, declines the honor. Here the matter rests, and, although over two weeks have past since the Governor has been notified to that effect, and in face of the publicly expressed desire of all those most directly connected with this important industry to reconfirm Mr. Haraszthy in a position for which he is so admirably adapted. No notice is taken of the matter. If all the other business of the administration is managed in the same slip-shod manner, the sooner a new prime minister is chosen the better. What between standng off Examiner reporters at the Capitol and engineering libel suits against the press in the different counties of the State, the present incumbent seems to be fully occupied, without shouldering the responsibility of the cares of State. The viticulturalists are not altogether an unimportant faction in politics and for this reason alone, if none other, it would seem judicious to respect their demands in at least one instance, especially as election times are close at hand.

GLECOSE can be detected in sugar by putting a large spoonful into a glass of cold water. Stir it a few moments, and you can see that the cane sugar is entirely dissolved, leaving the glucose undissolved at the bottom of the glass, in the form of a white. sticky substance, not unlike starch in looks. and bitter to the taste. It won't do to use hot water in your test, however, for if you do the whole thing will dissoive.

THE REPORT of Arpad Haraszthy, the President of the Viticultural Commission of California, which appears in this issue of the Merchant, is replete with valuable information on matters pertaining to the industry, and reflects great credit on the author, who has spared neither time nor labor in collecting and verifying the facts and figures therein presented.

Opening with a synopsis of the creation and early history of the commission, the report goes on to sum up its valuable labors in the way of distributing information on the fermentation of wives and care of same, distillation, and suggestions as to the appropriate variety of vines in different localities, with respect to a larger production of high-grade wines. It recounts the numerous observations upon Phylloxera. suggestions as to the best methods of treatment, and the use of insecticides, and remedies and preventatives against oidium, Peronospera, and other fungied diseases of the vine.

Considerable space is given to the proper method of curing raisins, drainage, vine fertilizers and the selection of proper varieties of grapes for table use, not omitting the legislative precautions which have time and again been taken for the protections of the purity of wines and brandies.

One of the most appreciable features of this valuable report is the tabulated statements of exports, by sea and land, of wine and brandies from California to Atlantic States and foreign countries, with values attached from 1875 to 1887, inclusive.

The present and future outlook of the industry is finally taken up, with estimates of the present area of vineyards and the value of their products within the last

Other information following, regarding the literature on the vine and its products, which from time to time the Commission has collected for the general benefit of all connected with the industry.

The report, from beginning to end, reflect arduous and painstaking labor, and it will undoubtedly be fully appreciated by our viticulturalists as a valuable reference, the more especially so when it is remembered that the service rendered by Mr. Haraszthy is, for the greater part, purely voluntary.

THE SUSPENSION of the firm of Wni. T. Coleman & Co., announced this week, must be regarded in the light of a public calamity. The head of the firm has been so intimately connected with the fortunes of the State, from its infancy, that his misfortune at this late day in a career of honorable business activity strikes a sympathetic chord in the breast of every Californian. His was not a fortune built up by robbing the community, in catering to the taste for gambling ventures, which has been at all times, as to-day, a marked characteristic of onr people. His wealth grew as the State developed, under the progressive business policy pursued by a few enterprising men of whom he was always in the lead. he adopted a more conservative course: believed less in the unlimited possibilities to he attained in opening up the vast intenal resonrces of California, there might have been fewer evidences of his work to be found in the reputation gained for our products in the leading markets of the world ; but the firm, dating back to '49, would still pursue the mediocre pathway in the business world outlined by the modern merchant,

than to go back. The grit and push which pulled the State through the dark days is rapidly dying out. One by one the old commercial houses, built up and carried on in the same spirit of enterprise, fall by the wayside. Branching out to-day in the business world means brain fever or loss of credit at the bankers.

It was a serious mistake to allow this firm to suspend. There is no doubt that all trouble could have been tided over by an extension of time. The assets are large in comparison with the indebtedness; large enough to have suggested some judicious action on the part of creditors which might have saved this mercantile community from a shock, the effects of which may yet have to be encountered.

While it is not definite at present that the business will be continued, there is this certainty, that the creditors of Wm. T Coleman will receive dollar for dollar.

The inconsistincy of the average Prohi bitionist is strikingly illustrated by the fol lowing story which finds its way northware from the little burg named Riverside, th, inhabitants of which are so strongly epposed to wines, that the unfortunate travelug public are compelled to refresh themselve with the alkali water peculiar to the distric or die of thirst. It appears, however, the these good people find grape growing profitable investment. Only for raisin making of course. Last year, however, a larger crop was gathered than could be handled in the driers, and none of the saints could be prevailed upon to try the experiment of facing the market with a sun-dried brand. The upshot of the business was that an offer from a firm of wine-makers was accepted for the surplus crop, and the innocuons muscats were carted off at paving rates to spread distruction amongst the neighboring towns in the form of alcoholic stimulants-Consistency is evidently a scarce jewel among the people of moral Riverside.

CHIEF EXECUTIVE OFFICER WHEELER OF the State Viticultural Commission has issued a pamphlet, the full text of which appears in this issue of the Merchant. It deals with the destruction of the animal and vegetable parasites of the vine, which at this season of the year are a constant source of annoyance to the vineyardist. The timely suggestions now made by Mr. Wheeler will prove of much service in case of trouble, saving as it will by a ready reference, much valuable time, where delay action is absolutely dangerous. With a copy of these recommendations and remedies at hand, the vinegrower is fully armed to protect himself, without the disagreeable necessity of hunting up the results of former experiments, in the hour of trouble.

THE OFFICIAL announcement is made that the Twenty-third Industrial Exposition of the Mechanics's Institue will open in the building bounded by Larkin, Hayes, Polk and Grove streets on Tuesday, August 7th, and will close on Saturday, September 15th. It is the intention of the management to make every effort to surpass the results of previous years, and the prosperity which is promised throughout the State during the summer months will nodoubtedly aid them in attaining the desired end. The Rules and Regulations governing the exposition and Premium List and applications for space will soon he ready and can be had on apon the principle it is better to stand still plication to the secretary.

CALIFORNIA BAISINS.

California has of late years, says the Sacramento Bee, become a great rival of Europeau countries in the production of dried fruits, and the domestic article is considered by good judges to be quite equal, if not superior, to the imported product. The raisin-producing industry of the Pacific coast is assuming enormous proportions. There are houses in San Francisco and other points that do an immense business of millions of dollars in that line of trade. The grapes used for raisins are the White Muscat. They are propagated by millions of slips, which are set out in what appears to be a barren plain. In two or three years the small slip grows so rapidly as to iocrease to the size of an ordinary man's arm and be able to support itself. The branches shoot out on all sides and big bunches of graves hang underneath. These are gathered when sufficiently ripe and placed on trays several feet square and of shallow depth, which are allowed to remain in the on for several days. When one side is horoughly dried the grapes are turned and the other side allowed to care. It takes nearly a month to prepare them for the martet. After going through what is the cooling house they are packed in box s in what is known as the London Layer style. The husiness is increasing from 6,000 boxes in 1873 to nearly 1,000,000 boxes in 1887. The industry is claimed to be even now in its infancy, and that in the next ten years we may expect to see a wonderful development in the dried finit business of the Facific coast. There is no reason why California is not large enough and productive enough to supply the whole world with goods of the finest quality.

The United States imports annually about 60,000,000 pounds of prunes, 7,000,000 pounds of figs, 53,000,000 pounds of raisins, 5,000,000 of almonds, 18,000 car-loads of oranges and temons, 250 carloads of preserved fruits, 250 car-loads of olive oil, and 650 car-loads of other fruits. This vast amount of imported fruit can be replaced by this State alone, to say nothing of the enormous quantities of other fruits indigenous to this country which it can also produce. It was only a few years ago that foreign grapes were brought to Los Angeles for winter use, and now, instead of sending to Europe, we can raise far better grapes, and can supply the demand of the United States, and then have a surplus for the consumers in other lands. Last year we sent 2,500 car-loads of fruit .o the East, and this year the shipment will, in all probability, run well up to 5,000 car-loads. For some of our canned froit, as dried, we have the world for a market and our apples are sent to Australia, Chira and Japan. It is only a question of a very short time when the \$20,000,000 paid annually for imported fruits will be expended for the California products of vastly superior quality.

Bonfort's Circular notes that Messrs. Pohndorff & Co. have made a success in Washington, D. C., and their small beginning of two years ago has grown into large, handsome cellars of California wines and a trade they can hardly snpply. Enterprise and pluck are winning cards.

THE DEATH is announced of the Marquis de Riscal, one of the best known vine growers of Europe. He has been for some time previous to his death a resident of Bordeaux.

SPERIOUS CHAMPAGNES

An interesting legal decision enacted in France concerning champagne wines, has inst been advertised in New York. matter is one, remarks the Western Broker, likely to concern the American wine trade and particularly the California trade which puts up American champague, so called The decision is, as announced by the court of appeals of Ancers. France, that no wineare to be labeled and designated as chimpague which are not made to the full of grapes grown in the Champagne district The suit in which this decree was reached was brought by a syndicate of wine growers themselves in the Champigns district, and the same wine growers, or their representatives, are about to institute similar proceed ings in the United States as well as in France and other countries, against manufacturers who apply the name champagne to the wines not produced from the Champague country's grapes. The suit having been brought against a Saumur merchant, Jules Lecluse, for the employment of de. ceptive labels. Lecluse was not only enjoined from the use of the name champagne on wines not wholly made in that district on penalty of 100 francs for each violation, but he was compelled to publish the sentence 100 times by placard and twenty-five times by newspaper, and this advertisement has just appeared in the New York Herald Mumm, as represented by his Rheims partner, De Bary, is one of the prosecuting members of the syndicate. There are eight or ten other prosecutors, and they are all wine merchants to whom the restrictions must apply, as well as to their rivals, Americans have been cheated so often that they take it for granted that all wine manufacturers are in the same boat as to the labeling and description of spurious win s, which this advertisement would seem to contradict. Each wine dealer can be compelled under this decision by some other wine dealer to abide by the decree, and there is so much rivalry that the chances for collusion are proportionately small,

The labeling of spurious wines in the past, and especially of champagne, has become, of course, an old story. He reafter, if it is clearly known that any wine called champagne is put up and labeled in France, the chance is that it will be gennine. At least on French territory the quality must b) known. The genumeness in America of what is called champagne depends on the character and the knowledge of the importers and the retail sellers. Champagne, it is said, has medicinal value, and for this apart from its interest to the wealthy, the matter of its purity has some importance. The prosecution of suits against the American appropriation of the name, if successful, will greatly reduce the amount of sparkling wine sold under that title

An extensive dealer in New York made some statements from the wine growers' point of view on the subject of champagnes, which may be interesting. He said. "The high grade champague merchants are not at all indifferent from everything except the profits of the husiness. The wine of the province of Champagne is a special point of pride with them, and in the production of it the larger merchants are an aristocracy which considers uself the aristocracy of the whole commerce of France. They are the merchant princes, and the producers of the Champagne district are the most exclusive and haughty of the number of wine producers, where all wine producers think highly of their calling. There can be manu- Hutchinson.

factured by artificial process wine which chemically analyzed is identical with champagne, but the final bouquet, the flavor which makes champagne what it is, is licking, as all connoisseurs perceive at once, and it is the effort and pride of the characteristic wine grower to maintain the general standard. It is their own seeking, as you see, that nothing is to be recognized as champagne that is made elsewle re, or mad in Champagne from other grapes. The amount of grapes that they consider needs sary to produce it is 100 per cent of the Champagne grape. There is something peculiar in that soil, and it is certain that ing as types of perfection these wines its grapes produce wines of bouquet lacking to the vintages of all other soils,

One of the large houses exported America between the years 1880 and 1888 over 500,000 cases of champagne. The entire stock of which this represents the export only is tour times the amount of one years product. In these wine vaults a year's reserve is kept to cover poor vintage, which is always liable to occur. In 1879 for instance, there was no champagne product whatever. The stock is held in the cellars, and willions of capital are thus tied up with it.

The fermentation of natural champagne is in bottles and takes three years. The cellarages are cut out of natural chalk of Champagne, the scal there being all chalk which is supposed to supply the occult properties necessary to the individuality of the champague wine.

CHEMICAL COMPOSITION OF THE GRAPE

It has been established by the most care ful analysis that the chemical composition of good and well-ripened grapes, is, in a thousand parts, as follows:

FRUIT -Water, 836, mitrogen, 17; ash, 8.8; potash, 5.0; soda, 0.1; magnesia, 0.3 phosphoric acid, 14, sulphuric acid, 0.5; chlorine, 0.1; silicie acid, 9.3,

Seeds-Water, 110, nitrogen, 19.0, ash, 22.7; potash, 6/9; soda, 0.5 magnesia, 1/4. phosphoric acid, 7.0; sulphuric acid, 0,8 chlorine, 0.1, silicie acid, 0, 2.

The eight decimals after "ash" represent the elements of that important mgredient; and it will be seen from this analysis that a fertilizer for grapes should be rich in potash, lime and phosphoric acid which, especially, so far as potash (much of it being contained in hard wood as concerned. tallies well with the general experience of the most successful vineyardists in this part of the world.

Boxforts Circular reports the spring back ward in Bordeaux, but this fact is looked upon as of favorable augury, because the danger of late frosts is avoided. The vintage of 1587 has proved a great victory for American stocks in the Medoe

All the vineyards are planting them where they are needed, as it is found that they amply repay the expense and trouble.

The winter in Burgundy is not yet over in spite of the sunny Easter days, and work in the vineyards has been once more interrupted by snow.

In Germany the pruning is pretty well finished in spite of the bad weather at the beginning of the month.

ATTENTION is directed to the new adverdisement, which appears in this issue, of horse and wagon scales, manufactured by the old and reliable firm of Fairbank &

WINES

Their Characterists and Adulterations

Frances Wyalt Ph. D. in continuation the subject in the Analyst of May 1, says

What really constitutes good promotion in the naturally possess, that would now example the naturally possess, that would now example the high value to a wine? The sisting cap our different, whether it has been red a knotty question, on which indicate a field before or after the fermination. imparts high value to a wine? deed a knotty question, on which in fact, the present state of our scientific knowelgodoes not enable us to answer. Her these confusing diff rences of public opin ion and preference bonn of projudice or half olucated taste. Are we justified near gards which contain the highest percent of alcohol; or those press ssing the largest proportion of sugar, or those with a mini mum of acidity, or are we to consell use of surer guide the total amount of extractive or solid matter, obtained by evacousting the liquid to dryness in a vacuum at low temperature? In our own emplicing opinion it would be ridiculous to charaterize either of these quality s as conclusive criterions. Nay, we may even go further and say the same of a wine that embodies them all-for, in our experience, we have met with hundreds of such, which yet were very poor and unpalatable vintag Under these circumstances, the only course open so analytical chemistry was the adoption of standards, are let has less to ann of our best investigators, for a los years, to accurately fix upon the constitucuts of the best known and appointed wines, from samples of known origin and undoubted purity, so that by emparison with them we might pass judgen at upon all the rest. However rational this method of proceeding may app an, and doubtless. is, it has yet nevertheless met with year harsh criticism and active opposition. It adversaries have argued that, since the very poculiarities which most on bar wine to our senses of smell and test unittedly depend so essentially upon the soil and other surpaindings in which can plant is grown, to fix any definite standard of composition must be both arbitrary and meansistent. They point out that certain vines flourishing, for instance, in Teagundy, may produce a wine of an myiri ble nature in the place of their nativity and yet, may, if transported to and plant d in California, Virginia of New Justs. yield, though treated in excelly the same way in every detail, a wine varying in every particular from that produced in France These are scrious objections, and vet, while we cannot exactly deny their trath. we deem it very unwise to exagger to their importance. What analytical chemistry is intended to oppose and to guard against is not the product of nature, but poorer rich in any desired particular, but it is a ful devices by which dishopest in a to imitate or to approve upon that by Acri Hence, our lack of knowledge of where. stitutes the element spoken of as the and or theyor of wines, is impost rule to the issue. We have made sufficient progress not only to know with absolute cutamity, there the better. the nature of all the tangible, presciptild or visible substances, which are dural are from the grape, of whatever origin, she unfailingly contain but the approximate relation in which these substances to 1 to each other. Thus when we susceed an undue proportion of any given construction or the presence of any substance which has not been found in the same ferm of combination in any known quality of

natural wine, we are immediately alde to

certify to adult ration and to identify the adulter int. With the exception of certain perfumes or others, there is hardly a single body which could be added to a wine in ord r to improve it or impart to it some desirable qualities which it is known not

In cylib nee of what we have bearned, we referred in our last chapter to a large num-I riof compounds contained in the graps, and to the constarty of their existence in excip variety, wild or collinated, in proportions varying with the degree of maturity attains I by the truit. It will be apropos it this proofure to give easer attention to grupe june , in ord i to more firm'y estabjish and strongthen our propositions. To commones with the sagar, there can be no dude that this hard. In torobe fly responsilds for marrly all the phenomena which see disparry the transformation of the care into win , and y t, so singularly nurtain and van date its proportions, that while some varieties centum as much as to percent, of the entire weight of glue in. there yield is little of one fourth of that amount. Next in may at once to the sugar we must cook the nitrogenous or albuminers leads s, since the action induced by there materiory change under the influence of cortain girms in the air, first exertes the glu use to vinous ferm ntation. came within kinds of goin, some poctie and much aginous principles, some dextrine and some minute qualities of fat or oil. After these come make, eithe and tartame costs, more or less saturated by potash and him , and combined with minute perpertions of sodium and ammoura, and finally, come variable percent igns of the phosphates of neuralization and nugrosia, traces of stact, charm, calbote acid gas and Ayg in water, in the ratio of from 60 to 80 tell citt, hadrig the whole misolation or s (ste list th)

Le vebbe of the e webb of all these s in a most that is to be submitted to intation, is gauged with great accuracy from its specific gravity as compared with that of an equal volume of pure water. Laking as a basis for calculation that the haven the liquid the great rathe amount of sugar, it has a sulted from the most careful observation, that where the most is a cound by Beaume's arcometer at a timparature of about 60 deg. Palm, each dea malicated by that instrument will correspond to the production of 1 per cent. of did by the fermentation process. Thus, for example, supposing the june to passess a strength of 10 deg Bourne, the wine, if allowed to complete its fermentation, will ent on 10 per cent, by videme, of absolute

> I do o atmo-d - -

Wars a folon first lights to make its apparane, take a lemon, cut off one end, put the finger in, and the longer it is kept

Mr. M. A. Powert is now in Boston to pr s ntu 2 the wire s and branch s of the Moder Viney and, in L. s Angeles

Now is the time to pay your subscription

Sabsouls for the Mercuras.

OUR NATIVE WINE SHIPMENTS BYSEA.

PER P. M. S. S. CO'S STEAMER COLIMA, MAY 7, 1888.

TO.	NEW	YORK.

A S Win Hoelscher & Co. 15 barre's Wine 712 4 V Co. A Greenbaum & Co. 30 barre's Wine 1,502 99 C & Co. Lenormand Brys. 20 barrels Wine 1,001 31 in diamond. Cal, Transfer Co. 30 barrels Wine 2,230 1,00 P Frapoil Berges & Co. 30 barrels Wine 2,230 1,00 P Frapoil Berges & Co. 30 barrels Wine 2,230 1,00 C S Co. 30 barrels Wine 1,255 3,10 C C S Co. 25 barrels Wine 1,255 1,00 C S baif barrels Brandy 1,150 5, 25 C M & Co. 25 cuses Wine 1,150 5, 25 C M & Co. 17 barrels Wine 1,150 5, 25 C S C S C S S Wine 1,150 5, 25 C S C S C S S Wine 1,150 5, 25 C C S C S C S S Wine 1,150 5, 25 C C S C S S Wine 1,150 5, 25 C C S C S S Wine 1,150 5, 25 C C S C S S Wine 1,150 5, 25 C S C S C S S Wine 1,150 5, 25 C S C S C S S Wine 1,150 5, 25 C S C S C S S Wine 1,150 5, 25 C S C S C S S Wine 1,150 5, 25 C S C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S C S S Wine 1,150 5, 25 C S S S Wi	MARES.	SHIPPERS.	PACKAGES AND CONTENTS	GALLONS	VALUE.
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Carpy & Co. 39 barrels Wine. 1,955 75 F. 19 barrels Wine. 2,445 11 N.M. 1 barrel Erandy. 51 16 N.M. 21 barrels Wine. 1,031 44 N.M. 21 barrels Wine. 1,031 45 N.M. 25 barrels Wine. 1,282 25 N.M. 25 barrels Wine. 1,231 45 N.M. 25 barrels Wine. 1,229 45 N.M. 25 barrels Wine. 1,229 45 N.M. 25 barrels Wine. 247 17 N.M. 25 barrels Wine. 247 17 N.M. 25 barrels Wine. 247 17 N.M. 25 barrels Wine. 504 25 N.M. 25 barrels Wine. 742 27 N.M. 25 barrels Wine. 742 27 N.M. 25 barrels Wine. 742 27 N.M. 25 barrels Wine. 745 27 N.M. 25 25 25 25 25 25 25 25 25 25 25 25 25			1 5 barwals Wine	1,219	
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B	v. M				
B					
25 barrels Wine 1,231 3 4 5 5 5 5 5 5 5 5 5					
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P	J	1			
B	P	1	O'S hamed Wine		
B. 5 barrels Wine. 247 17 n diamond. 8 Lachman & Co. 10 barrels Wine. 504 20 n diamond. 15 barrels Wine. 742 20 n diamond. 10 barrels Wine. 505 20	48	1			
n dismond	D.				
n diamond		4			
n diamond					
10 Datters wille 2010 21	u diamond				
williams, primong & Co 10 parrels wine					
	ð	williams, rumond & Co	TO DAFFELS WINE,	426	1.5
	a Otal aniount of wine,	OU CASCS ADD		50,988	\$1,912

TO CENTRAL AMERICA.

A B, La Libertad	Eng de Sabla & Co	12 eases Angelica		8.42
N. M., La Libertad		2 barrels Wine	65%	51
T W J, Corinto	Chicago Brewing Co	2 cases Whiskey	5	20
4.6	**	2 ca es Wine	5	
A B D A, Corinto		2 cases Wine	5	÷
T A & Co. Puntas Arenas	Montealegre & Co.	12 kegs Wine	240	230
F E & Co, Puntas Arenas	Ga legos Wine Co	9 barrels Wine	153	90
B & Co, La Libertad	John T Wright	1 barrel Whiskey	44	69
E C & M, La Libertad	***	3 half-barrels Wine		48
J M. Acajutla	Koh'er & Frohling	2 quarter-casks Wine	30	60
B & C, La Libertad	W L S Haas	1 barrel Whiskey	4.4	666
ER, San Jose pe Qunt		30 cases Wine		1:30
J E M. Puntas Arenas		4 barrels Wine	108	97
ts.	4.4	12 /a-es Wine		55
E. E. Puntas Arents	Parrott & Co	1 half-barrel Whiskey	25	113
		110 cases Wine	264	500
	4.4	2 kegs Wine	40	30
6.0	4.4	2 cases Brandy	5	25
11		2 cases Sherry	5	1313
44	+ 6	2 casks Claret	60	22 70
+ 6	T+	3 cases Brandy	48	100
A G, Acajutla	44	5 cases Wine	12	25
G. in oblong, Corinto		20 cases w ne		20
	64	4 kegs Wine	40	101
P A A. Puntas Arenas		7 kegs Wine	140	140
		, and a second s	× 10	1 10
Total content of Title of	62 cases and		1 922	\$1.681
Total amount of Whisk	£1		118	265

TO MEXICO.

C H, Mazatlán		I barrel Wine	5()	8 40
J C, Acapulco	Gutte	2 casks Wine	126	.5.
R T, Acapulco	**	2 casks Wine	120	15
L Y R, Mazatlan,	Cabrera, Roma & Co	S cases Wine	- 1	33
L S, Mazatlan	**	1 barrel Wine	49	23
E K, Mazatlan	Bedington & Co	1 keg Wine	18	12
Total amount of Wine, 8	cases and		357	\$214

TO BUENAVENTURA

0&0	Eug de Sabla & Co 1 keg Zinfandel	$\frac{20}{20}$	₹ 1 ₀ 10
Total amount of wine		40	\$ 20

TO ENGLAND.

C J B, Liverpool	F Martin & Co.	10 cases Wine	1 2	2 16
	An all all blill by Collect		 	Ç 917

TO NEW YORK-PER STEAMER AUSTRALIA, MAY , 1888.

S I J	. CD Bunker	. 7 barrels Whiskey	218	8 216
		. 5 half barrels Winc	10%	20
Gin diamond	Donald Gedge	. 173 kegs Wine	1.140	94
H J	Arpad Haraszthy	. 3 barrels Wine	148	1.3
4.6	* **	26 kegs Wine	130	108
4+	6.6	11 kegs Wine	110	96
*1	**	15 cases Wine	18	- 39
1.6	44	1 barrel Wine	4.7	5
F A S & Co	J Morton & Co	.1 barrel Wine		
1.6	**	3 cases Wine	221	150
G Ľ М	. Kohler & Van Bergen	25 kegs Wine	125	12
44	44	5 half barrels Wine	168	16
8.4	44	10 cases Wine		50
W C P	B Drevius & Co	. 55 kegs Wine		0.
.,		75 kegs Wine	925	798
Total amount of Wins	10 cases and	-	3 140	\$2,686
Total amount of Whi	ober		218	11

MISCELLANEOUS SHIPMENTS.

DESTINATION.	1 F2=F1	Rto.	GALLONS,	VALUE.
Canada	Mexico	Schooner	100	8100
Hono.nlu	Cealandia	Steamer	1.538	1.300
Victoria	Mexico	Steamer	34	34
Auckland	Zealandia	Steamer	190	48
Japan arqal	tacherrer	Steamer	12	34
l'etropanhd-ki	Alexander II	Steamer	1,170	
Victoria	matida	Steamer	56	59
Mexico 3	donstenat	Steamer	256	113
Victoria	devico	Steamer	1.089	3 17
lahiti	'ity of Repecte	Barkentine.	916	357
Japan	ity of New York	Steamer	357	255
Potal			5,712	\$3,408
Total shipments by Panas Total Miscellaneous shipr	nua steamers		S gallons	\$21,090 6,094
C-ultotal.		413.744	-	101

Fairbanks' Standard Scales

WAGON SCALES

VINEYARDS



BARREL

AND

BOX TRUCKS

Our Wagon and Platform Scales are used by all prominent Vineyardists and Fruit Growers.

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FOR CLARIFYING AND PRESERVING WINES.

The undersigned having been appointed Sole Agents on the Pacific Coast by Messrs A. BOAKE & CO., STRATFORD, Eng., for their renowned

LIQUID ALBUMENS,

Bog to call the attention of Wine Grovers and Wine Merchants to the following articles, the superior merit of which has been confirmed by Silver Medals, the highest award—given at the International Exhibition of Paris 1878, Bordeaux 1882, and Am terdam 1883, vizz.



LIQUID ALBUMEN FOR RED WINES.

Zinfaudel, Claret, Burgundy and Port.

LIQUID ALBUMENS FOR WHITE WINES,

Riesling, Gutedel, Sauternes, Sherry and Madeira, also for distilled liquors; Whiskey, Gin, etc., etc.,





For Preserving the Brilliancy, and for Neutralizing excesive acidity of

White Wines only. WINE CORRECTOR,





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For Restoring Badly Made or Badly Treated, Harsh and Acid Wines.

A trial according to directions will prove the Superior Qualities of these Finings

CHARLES MEINECKE & CO., Sole Agents, 314 SACRAMENTO STREET, SAN FRANCISCO.

FRATBULENT FRENCH BRANDIUS.

We have the authority of the National that French brandy, warranted pure and labled with any brand, of any desirable age, bouquet, etc., is manufactured in vast ing German potato spirit (Kartoffel-Branntwein) and flavoring essences from various open France to American products now sources. The amount of this stuff that is exported to America, England and the colonies of the latter, is said to be something poisons which France is sending to us in enormous. It is strange that the French such enormous quantities.

government, usually so punctilious on such things and severe on sophistications, does not take some action in regard to the mat-Druggist, based upon the reports of the ter, especially since attention has been British consulate service, for the assertion drawn to it so publicly and officially. It seems to us that the facts here stated, along with the well known falsifications of French wines should furnish the American quantities at La Rochelle, the materials be- Congress with the excellent basis for a bill of a retaliatory nature, which would either virtually excluded from that country (pork,

WM. T. COLEMAN & CO.

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Booth & Co, Black Diamond. Coleman Flag. McGowan Bros' "Trap" Brand. Fisherman's Pkg Co, Aberdeen Pkg Co. White Star Pkg Co, Jas. Williams & Co, Thistle Pkg Co. Columbia Canning Co. McGowan & Sons' "Keystone" brand. Seaside Pkg Co. J. W. Hume "Autograph" brand.

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FRASER RIVER.

BRITISH AMERICAN PACKING CO.,

BRITISH COLUMBIA PACKING CO.

ENCLISH SKEENA RIVER.

BRITISH AMERICAN PACKING COMPANY

"TOMAHAWK" BRAND, SUNNYSIDE PKC CO.

SACRAMENTO RIVER. COURTLAND PACKI'C CO. JONES & ANDERSON.

We also offer For Sale of Other Columbia, Sacramento and Fraser River Salmon:

Ceo. W. Hume's "Flag" brand, Hangood & Co., I X L, Pillar Rock Pkg Co., Geo. T. Meyers, Ocean Canning Co. Badolett & Co., Flats,

"SILVERSIDE" BRAND.

BATH CANNING CO.

Washington Pkg Co's "Favorite" Brand, 'Epicure'' brand. Pacific Union Pkg Co.,

Cutting Pkg Co's "Cocktail" Flats.

'Carquinez"

Point Adams, A. Lusk & Co's pack, "Mermaid" brand,

Scandinavian Pkg Co., West Coast Pkg Co., Warren & Co., "Carquinez" brand, Wadham's Fraser River.

ALASKA FISH.

Karluk Pkg Co., "Challeuge" brand. Arctic Pkg Co., Arctic Pkg Co's "King" Salmon.

We also have the "O & O" brand, an outside river fish, and many other brands, that can be had on application.

ARE SOLE AGENTS FORTHE CELEBRATED

Golden Gate Packing Co, "Black Diamond" brand of fruits, Barbour & McMurtry's fruits in glass, Coleman's "Flag" brand of fruit San Lorenzo Pkg Co, Riverside Fruit Co, Colton Cannery, J. Lusk Canning Co, San Mateo Pkg Co, Sierra Madre Packing Co, Santa Clara Packing Co

Our lines of Canned Fruits and Canned Salmon are incomparable, and we will make prices F.O.B. or C.I.F. for Great Britain, Australia and the Colonies.

WINE MEN OF SOUTH AIRICA.

The Cape Argus reads the wine grower and dealer the following common sense lecture on their mutual disagreements, much of it is applicable to some of our own people who never seem happy unless in hot water. "The boycott is a weapon of mighty force; but its working is as little developed as the "corner." One of the coming struggles of the civilized world is one in which "corners" and boycotts both will play a great part, but we scarcely think that the Cape wine farmers can use either of those double edged weapons effectually. The "corner" was tried last year when the Brandy Bond was started, the farmers pledged themselves not to sell under £10 per leaguer; but it failed most miserably. Mr. Joubert's proposed boycott would be still more liable to fulure; and until we have reached the point of perfection at which we can engage in social warfare, after the most approved American methods, we had better let such weapons alone. The Brandy Company will, we should hope, become a success, without its being necessary to excommunicate anyone who declines to take shares. It is a very curious fact that the Anti Convict Piedge, of a full generation ago, should have so burnt itself into the minds of the people of this country, that the boycott, as a means of exercising social or even commercial pressure, should have been advocated and sometimes practised long before the name by which we now know the practice had been applied to it in Ireland.

If public movements and public aid of every kind could place an industry upon its feet, the Cape wine farmer should be the most flourishing of all colonists. The tariff is higher with respect to wine and spirits than it is to almost any article of consumption, affording the wine farmer a practically undisguised, but still very real Protection. The Excise was declared to be a burden which fell upon the producer, and it was removed, while it was retained, so far as if efforded Protection to the wine farmer-internal Protection, that is, of colonist against colonist being a thing nuknown elsewhere in our fiscal system. Special Acts, so rigorous as to forbid the importation of a bit of shannock with which to celebrate St. Petrick's day, have been passed in order to prevent a plague approaching the wine farm r, and fresh Acts, involving public expenditure, passed to extirpate the plague when it has found its way here, despite not v ry scientific prohibitions. An experimental wine farm has been set up, and experts engaged to teach the wine farm r how to improve his product, and the prizes offered by Government with the same object, have been supplemented by the most munificent offer of prizes for public objects ever made in this country by a private individual. Added from 124 pounds. In response to questo this, the Cape Town merchants, undeterred by previous losses, have formed a syndicate for the encouragement (by purchase and export) of wines made by the modern method. The list of favors and attentions could probably be extended, but we have said enough to show that no colonists of any class have had half done for them that the wine farmers have had done for them. And where are they after it all? Not very far, we fear, from where they have been throughout, although it would be wrong to overlook some slight signs of improvement, not the least of which are the genuine firms to push the wines of the new and some of the outside branches, and by and spect is paid to the laws of its nature and was liable and died from its effect.

improved manufacture-more or less after Von Baho's method-and with some success. It is of no use to be bitter against the wine farmer. He lives an isolated life, and is very much cut off from the influences that have made the Australian and Californian enter the race two hundred years after him, and then leave him behind. It may be a sore point, but the truth must be told. The Cape wine farmer's want of tamilianty with English prevents his being subjected to the quickening influence of the press, by which he could learn each week of what was being done all over the world in his own industry. How many wine farmers take in the British, or any other wine trade journals to see what is required in the mark ts of the world? We do not care about them having British journals, let them have German or American; but until the Cape wine farmer is educated up to alertness to every movement of the world's markets, and to the changes that are going on in his own, as in every other industry, not much will be done with him, unless it be by the example of the few men of intelligence and progress who are already doing their best to improve the manufacture of wine, instead of seeking to bring about "corners" or hoveotts in brandy. It is from the example of such enlightened men that most hope is to be drawn for the future of a most depressed industry.

OLIVE CULTURE.

President Ellwood Cooper, of Santa Barbara, read a short essay on the olive culture before the State Fruit Growers' Convention at its last meeting. He recommended at the outset the reading by those who desired information about olives of his essay which was read in 1885. He suggested also the reading of pamphlets by F. Pohndorff and Adolph Flamant. In his late experience in planting, he had found that trees should be planted far apart, nearly thirty feet. His trees were planted twenty feet apart, and recently every other row was removed. Trees might be planted twenty feet apart if desired, for several crops may be gathered before removal, as some of the trees will have to be removed. Mission olives only are cultivated on Mr. Cooper's place, and he admits having little knowledge of other varieties. The olive will flourish in all parts of California, and so far as product is concerned; Mr. Cooper will defy the world to equal the oil produced on his place. The oil is sure and profitable, but trees require care and cultivation. He recommended those contemplating olive culture to plant different varieties and await results. The best result on his place was 10.56 pounds of olives to one bottle of cil. The poorest result was a bottle of oil tions Mr. Cooper explained regarding the drying of the olives prior to making the oil. The olives are picked early in December when the fruit is half red, half green. Pruning is begun the second year. It is a good plan to let all the small branches remain until the tree is five or six feet high. High pruning is better than low pruning for coast countries. Mr. Cooper never heard of any olives being sun-burned. He has no black scale on his place. method of looping off perpendicular shoots and "inside pruning" recommended by Trench experts is unnecessary in California. efforts made by two or three Cape Town Let the trees grow up straight, cutting off

branches would fall over outward. Cut-bay tree plant d beside living waters, !! tings about 11 inches long, from -, to 112 inches in diameter, the ends sawed with a self," and reward its owner's kindly care sharp saw, are generally planted. They and protection with an abundance of the are planted in the nursery in rows five feet, choicest of all fruits known to any part of apart and five or six inches in the rows, the world-for what can compare with the They are planted slanting, heading north. Nothing on Mr. Cooper's place is ever irrigated. Cuttings are planted both in the nursery and in the field, and then the nursery enttings are used to replace thus that fall in the field. The clive orchard should be searched every May, usually for traces of the black scale, which is the one great danger to which olive orchards are subjected. Mr. Cooper expends about ~150 yearly in fighting this scale. The trees require three or four wash's yearly. One laborer can pick 300 pounds of divesdaily. Trees are picked clean of all fruit. heavy subsoil is not good for olives. The ground should be cultivated and warm, not wet, whin cuttings are planted. Cuttings do b st when planted in March er April.

DECAPITATION OF INSECTS.

The Marysville Appeal says. Forbes, a brother of the District Attentive. has a very effectual way of d alive with certain insect pests injurious to fruit trees. On the foothill ranch of the broth re several hundred olive trees were set out this spring, all of which have become well established and are making a good growth. But of late, a fly known as the twig-horer has appeared in the orchared, and has perforated a number of the branch's of the little olive trees. It eats its way into the center of the twig, and proceeds to hidlow out its domicile for a space of an inch or two, leaving a hole to mark its place of entrance. J. C. Forb-s keeps a watchful tye on the trees, and as soon as he discovered the presence of the pests be made war upon them. He went over the trees, one by one, and wherever he found a hole in a twig he dag out the fly and out its head off. He called at the Appeal office the other day to ascertain what was considered the best way to dispose of these insects, but nothing more off-ctive than his own method method of treatment could be suggested. With large trees, however, some form of spray would parbably he found useful to prevent the attacks of the insect, though they do comparatively little harm on large-perhaps destroying no more wood than would be removed by pruning.

A PERPETUAL WONDER

The grape vine, the Vinegardist observes. is one of the most wonderful things in the whole range of the vegetable kingdom. Its species are many, and its varieties innum. erable, as the seeds of every species and variety always produce new varieties, instead of reproducing the kind of vines on which they grew.

And then it is almost impossible to acclimate the vine imported from foreign countries, and introduce it, even with the most careful nurture and culture, to adapt itself to new locations and surroundings. It languishes like "a pilgrim and stranger in a strange land," and finally droops and dies, like one stricken with feebleness and homesickness, who vainly pines for friends, kindred and home.

But when native and "to the manner born," if only given a fair chance, and re-

by when the trees begin to bear, the development, it will "flourish like a greensoon do much toward "taking care of itrips, become and tompting clusters of the

> The most mary-lous thing, however, about the grape vine, is the amazing instiket, almost amounting to intelligence, which it mainfests in its search for needed moisture and food. In times of drougth, it will send its roots many feet away and down dop into the earth, in search of water, and fully as far in the quest of natrition, in the shape of a buried bone or other fertilizing substance, which it surrounds with a thick mass of fibres, and never leaves until all is appropriated, as required to its growth and use,

> The science of grape culture consists in knowing the nature, habits and wants of the varieties you are cultivating, and supplying the soil, and, through the soil, the vine, with the proper food on which it lives, grows and yields a full fruitage, year after

> If wrongly cultivated, placed in a bad location, neglected or abused in any way, the vine resents the indignity, as certainly as can any s-nsitive human being, and always makes its feelings of resentment known, in a way that cannot be misunderstood; but, if well and properly used and encouraged, it never fails to manifest its gratitude, in a manner equally positive, certain and unmistakable to all intelligent minds. The moral of this great truth is obivious, and needs no further illustration.

OUR SECRET SOCIETIES

There are over two hundred secret soci.ties in the United States, according to "The Cyclopsedia of Secret Societies." published by William Mill Butler at Roches. ter, F. Y. This includes all fraternal, beto volent, social, insurance, political, relig. ions, t imp-rance, and other orders, whose members take an obligation and hold secret essions. The present membership in the United states of som of the leading organizations is reported as follow, for the World Almanae bp Mr. Butler:

	Membership.
Free and Accepted Majous	600,000
Independent Order of Old Fellows	530,300
Knights of Labor	500,000
Grand Army of the Republic	380,000
Anights of Pythias	210,000
Anights of Pythias Independent Order of song Templars	+200,962
Ancient Order of United Workmen	191.876
Kuights of Honor	124,756
The B val Areanum	. 80,000
Improved Order of Red Men	
American Legion of Honor	
his gate and Lidies of Honer	$19,200$
Sens of Veterans	, 47,000
An lent Order Forester-	. 39,539
Doughters of Rebekah	(33,958
Knights of the Golden Eagle,	. 30,000
Order of Chosen Friends	
Independent Order of Buai Brith	
Order of United Friends	20,000
Am lent Grier of Druids,	
Knights of the Maccabees	
United Order of the Golden Cross	
Benevolent Prote tive Order of Elks	, 6,500

The total number in the world is variously esti-ated at from 3,000,000 to 5,000,000.
The total number in the world is 483,103.
This is exclusive of 33,333 Odd Fellows (male) he have taken this degree.
Sible total number in the world is 67,060.

THE Western Broker indulges in the following sly hit at the prohibitionists; "The Duke of Wellington loved good wine. At one of his dinners, however, at his home in Strathfieldsaye, he drank a few glasses of iced water, and in the night was seized with one of his epileptic fits to which he

PORTIGN VITICULEI RE.

The Circ. og 5 mats for agugrower is that part of the worst.

Mr. Berneud's oliverand he values at about \$1000 the new interest alp, we also alculates his not profit at sho the nor the lis trees are on hillerles, plant de il out en metris apart, and some of them exellows, 200 years col. House'th Noveale office, of Nice, for oil, and the Verdalor eating. The trees in his min, and out this is simply due to scar ity to vertice He grove vegetables between his tiwhich is not at all orth lox a day of cions or sitps are acso mach. to Gye or six veers.

The vine growing of South in Tr. ainly aimed at wine backing and C. ssly conflicting. A few points in possible id low, even moist, but the best qualities by the state than makes amends. e grown on slopes, oft in where it is e to the plew, while the plants over 1 in tantity. Virgin seal is the best of 1 in nes are to be r placed the ground shortd given other culture for a term of years is the rule to keep van yards from from the rule to keep van yards from from her cultures. The earth should be oroughly grabbed before planting, to a edium depth of twenty med so Practice

"t" to strong are counted as among the roads in the world with their cibe, and the SP 63: to year court fifty per cent, more heavily sixely their wire. The more only of the first nce, gives the following not risting feets. Law this and they recken on the same to begraph and of circ wire new in use is the virtual not made and strong law estaget egarding the olive and vine in South to energy point figures from a point of from their establishment. The term is to be an active down to the lowest Europe, obtained from the product Associate. There is another in the tore this city is prepared to foreshow good at a subsection. But this may eventually will not of Mr. Bernoud, a provided to see the strength ring the vine, and that and sizes of wire rope, wire rope fast rocks, of we are bessule in discusse, and when a telling hash soil from other bealth significant dateligraph and to phone we and an at it about the plants to imput | insulated electric wire in anticipal at its

> It shappy the vine a great variety of [ds are employed, the desideratum bego nisty of the product. The naturthe Volt land, in It by, Mr. Rodbards and here. this method for the lest results.

nodern standards. This is a very constant. In the South of Transcribe in stecontinon abit in parts of Italy and is a veryly cuter method is the short training, but it has ised. In regard to singular, it is said to my or n by explained that the vines hat while it produces more and larger their it deare short relived. The fine ruit, it tends to impare the quanty of the somes of the Bordeins are usually trained il. However, the olive trees in this party; has and many of the best varieties of f France are often watered by hand it will grop state poor bearing while they coded. In the nurseries the young ties are triamed short. It seems, in fact, that rerais deconsiderably from sood, but up the dimand of the vine itself is the proper ss these are graft I they do not bear good to the style of its culture. The wine ntil eighteen or twenty years of ag . Whote grapes in Southern France, French authorisions or slips are assertinged in a distribution in innered the Mascats, the Greinache, are nurseries, and are professed. They the Members, the Little Syrah, and the If for twenty to twenty-five continuous line ax. They be commend also be freezing of objectives are not under the first and general groups as suitable to n such cases, the last cure is to out the resoli and country of Southern France in financias the Madeira and the Cyprus ondon markets. It is somewhat difficult the Marsada of Sicily and sundry others become accurately infermed as to the Tope In the best quality of wine, it is st methods of this culture, and the proper in essery that the greater part of the juice selection of stock, as opinions are hope in the greques shall disappear under the of the sun. It follows that the ay not be out of place. The vine will yield of wine may be only a fifth that of burish in southern France on high band addragy wine, but the higher price it

---INCREASED FACILITIES.

Increasing Business.

In 1873 the well-known manufacturers of) him is of wir raps, M ssrs, John Λ . ries very much in this respect. A Robbing's Sons Co., of Trenton, X. J., brough turning up of the line ladis to a to I a branch house in this city. In e long vity of the vite. In secretar, 4881 Mr. S. V. Mooney took charge of the ps, which are the best for propagation occupy, and ramoving to No. 14 Drumin is important to Tick out views as one see to demonstrate ded to successfully in- was not equal to withstanling the offers of If not take them at random. It is by to do the goods mainfactured by the the wine, and adoter had to be brought in a system of selecting that the existence of selecting the existence of selecting that the existence of selecting the existence of se nes of the Brauj lais have be nelevelog of break as if this establishment liner used. Laboratory, and the punishment inflicted m the common team systeck. Not only that the store on Drumm street, although was a fine of 1,000 france and one years ke from choice stock, but school from the envery other closes 27x20 feet, and a base, junjaisenment. at branches, repeting such is and other in int, has not been large enough to accomsh. The bist cultivators to-day never modat the business. For ever forty years cuttings over thirteen makes, and ten the firm of John A. Roebling's Sons Co. advocated as better, with the upper eye between engaged in manufacturing wire proved of, and frequent stirrings of the of the kind in the world, employing many

of Lines. In parts of Santzuland mines of the Constack as admost excluis via an soil is the initiaral home of the best Lak. Superior copper. The ~ 0 pany are the propin tors of the New Years of mesh wind a sheen cloth, galanized and timed wire clath, fire prost was letter of the stock must determine the form. In ote, a large stock of which is happen hard They also manufacture the Mr for an found the vines in stry trained brated buckthorn forcing, which is for hagh to disessors notices. Some stocks supersoding the dangerous barbod wire at 1 gives the universal satisfaction where vi-

> In their new and enlarged quarters, John A. Radbling's Sans Co. are prepared to stall customers at their stores $X \in S$ differential with center to feurolation. and 14 Drun.m str · ts.

FRENCH EXPORT WINES.

can public to beware of Ur uch liquors, merin making brandy for export, he goes on tget allove the ground, and will be ar again. Amondos of Spain, which gives the Xeres; dates 1863, 1870, 1870, etc. do not, he says, has been made to rescribb as closely as ising of table graps for the Pans and wine, the Lacryma-Christi of Naples, with possible that which was really made in these years, in other words, the brandy's at hither from France is spurious, a concoctron put up in a laboratory, in which the tastof good brandy is counterfeited by various

It is worthy of commont, that while the law against the selling of spurious wines and liquors in France ar rigid in the extreme, little or no attempt is made to prevent the chemical preparation and adulteration of these liquers for exportation, Quite recently the proprietors of a Pan's restaurant were arrested and tried for selling wine, which by its composition must have been intended only for export. It was colored with an extract of coal and mixed with plaster of Paris in pretty combination, truly. A man and his chastren who drank it testified that it had ha very pleasant taste of raspberry. which shows what imagination will do.

But even so strong an imagination is this

WINE NOTES TROU CIPERTING.

A correspondent of the San Jose He. . I and wines of Bordyaux and Champagne acres of ground, with all the improved hold 14 cents. This is quite a low north es) upon the vineyards, or four times easy insign bridges, etc. This establishe to wine-makers, overlocking altogether the a protective obment, not necessary with tt quantity every four years. The wines I ment has furnished a majority of the cable possibility of their being eventually obliged I foreign values

tak are of their wines I. u. l. the mubble men have still film positing head of every varietal has its own wire count the situation was be provided and the winea with a the advantage of the market, tarthodo soll for an Common residens Who Coth Community to condition had a larger of the court the shipments steely as to his see who takes the trible to to the restore of the freight that is being to the section the wharves and the agh Tames Id-pet of San Francisco

Renard Harry Jr., Dock Kifer and by Barrier and your man who are contrapatate berting win colurs. Amongst these wie have been doing the past year are J. Lie Beller, Captain, Woods, S. Schins or and the Fathers of the Santa Clara further increase their body, so, and wid Mila. Especially to the colors of the pay every attention to the weats of their Tathers and S. S. Linger, handsome affairs,

AN INTERISTING THEORY

A . It speaked to the brey edist says. Secretary are ago, whin I real the report of United States Consul Guter by Derdeaux, by German static, in editing extension to says the Besiren's reasons, waters the America the fact that American vines contained resin path sip. I looked upon it as an wfact to pure French brandy is sent hather. After the hard by in the memory for future use. pure French brandy is sent hather. After the full bearing did not come to me then, commenting upon the methods employed but has a dually unfolded itself since, and rees to the ground, have it to jush again, as passent struggle to revive the wine installing braindy for export, he goes on to I have been waiting and wondering if other and also plant out shoots from the old distry. The Furmint of Hangary, from say that the bottles do not represent the horn mituralists had so noted the bearings, pots. The shoots should be four or the which cames the Tokay wine; the Pedros quainty of the liquor they contain. The but have seen no public expression of it if they have. The observation was made in 1th Ersmisch of Persia, from which the mean that the inclosed liquor is brandy put commence with the study of the injuries of Sharas who is mad; the Mulvoiste, which ap in those years. It means that the hope replay as at Eastates, upon the vine, and seems to have gone no further with horticulturalists. But, in my mind, it has gradually grown to be a most important and programs fact, in explanation of some of the habits and growth of our native vines explaining certain things that before I hold not been able to explain, and it is not true that the ordinary vineyardist assigns no imcontance to the fact that resin is an element of the sap of the vine, but when by observat. in and experience he has informed him. self of the impediant part that it finally plays in the vine soconomies, he is full of inter st, and takes instant measure sto avoid the evir results of some of our faulty and car less system of pruning. Everyone has doors d that diff rut vines require a different style of priming compared with har pean methods. The reason for these inversities in moth ds is now apparent. We must throw away the old and begin with the new Take countrance of the bearings for a fact, and make application of it to the and a as will as combetting the inat used its of the punctures of an insect. The suit was brought by the Matacipal Indians in ther interesting bearing in the strily of this topic of rhaps not of so much protection portation to the smooth list is to List. This is the question, how did it and all at that risingless been developed in the superfithe native and act in toroign vir s. I thank it may find its explanation writing from Experime, says most of the initional producions of Physical Englidezat the level of the soil. Manuring is peables. Their establishment is the largest wine ment for have been selling off their plantages, the affect the plant bestock this spring. Mr. L. S. Gager of Sec. in 2 metric of and the atend with extermibut a sparing use of the plow. The hundred working-men and covering several Francisc obtained 16 cents and C. Mey remained to great assemble gont sever the would be a leady the succeed, with its exideregularly manured, the recognized machinery that skill, experience and money for our wines, for they are wines festigated to so these plants done surviving that were ory being that a pound of manure makes peak provide or suggest. Wire rope or cable quality. The fact is that we are passing allowed exclose the greater amount of resin ound of grapes. In the Reamplais they is there made for every conceivable purp so through the season of low prices product 1 ones complements in their sap. The insect between eight and nine thouse. I most suspertant of which are for hoisting in long ago. All who have planted vineyards it mig found matrix in America, and not in ands of manure yearly per hoctare 2010 mines and quarries, or cable roads, wire so far have figured on selling their grap s' Eurepe, the American vines hield to invent



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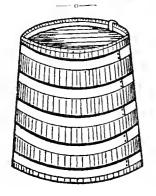
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PHYLLOXERA IN AUSTRALIA

The phylloxem still dourish s in the fineyards of South Australia; and at a recent visit of the Board of Inspection to Regiong, three properties in the Batesferd listrict, which had been used as vineyards, were visited. On a property occupied by Mr. Bennett, off the Batesford road, the lecayed roots of vines were found, but not my traces of the phylloxera insect. Somnalthy vines were discovered growing be ween the original vineyard and a dividing

Mr. C Craike's land was next inspected. and many holes were sunk on part of the property which had been extensively diseased, but the inspectors failed to find the hylloxera, although some vine roots exnibited signs of vitality. On the property ormerly owned by Mr. Hunt and used as a ineyard, the phylloxera was found on a line two feet below the surface of the round. This hand had been plowed and lso trenched.

The members of the board continued heir inspection in parts of the German own and Highton district on the following

The old Vineyard Company's area at lighton, and now occupied by Mr. C. Matte to address on application, er, Jr., was first visited. Several holeere sunk in search of the insect, but only ecayed and a few live rootlets were disovered. In the next property, however, hich had been used as a vineyard by Mr has. Maurer, Sr., live roots were found in ght sandy soil, and decayed roots in thick ayey kind of ground, but no appearance r trace of the phylloxera scarched for by ie board upon any of the roots.

At Waurn Pond, about three miles disint as the crow flies, several holes were ext sunk for the board. Decaying roots ere found in them, and on a close inspecon on the hill top of Mr. Tetax's land the ots were found to be full of vitality, and ome covered with phylloxera vastatrix, be members of the board were satisfied at phylloxera still existed in the district, ad returned to Melbourne by the midday in the same day,

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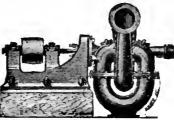
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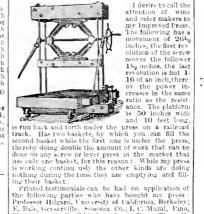
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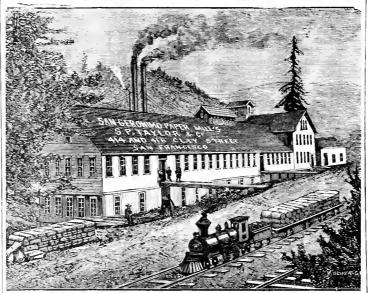
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3.00 P	(For Haywards, Niles, and)	9,45 A
3.00 ₽	For Sacramento and for	9,45 ▲
4.00 p	(Knight's Landing via Davis) For Stockton and sMilton; for Vallejo and Calistoga.) Central Atlantic Express,	10.15 A
4.30 p	(for Vallejo and Calistoga.) (Central Atlantic Express,)	12 45 P
	(for Ogden and East)	• 845 A
4.30 p 5.30 p	Livermore	7.45 A
	Sha-ta Route Express, for	
6 30 s	1 11cdmin., a or closed a second	7.45 A
	Sound and East	
7.00 P	press, for Santa Barbara, Los Angeles, Deming, El	9.45 P
	Paso, New Orleans, and East.	
800		ION.
7 45 A	For Newark, San Jose and)	8 05 P
8.15 4	For Newark, San Jose and J Santa Cruz	6.2 0 p
0.10	Creek, and Santa Cruz	
* 2.15 P	For San Jose, Felton, Boul-	• 10.50 ▲
4.15 P	For Centerville, San Jose, Almaden and Los Gatos	9.20 A
NORTHERN	DIVISION (FOURTH AND TOWNSEND	STREETS.)
7.15 A	For Menlo Park and Way) Stations	2,30 г
; 7.50 A	Monterey and Santa Cruz	8 35 P
	For San Jose, Gilroy, Tres Pinos, Pajaro, Santa Cruz	
8.30 A	Monterey, Salinas, San Miguel, Paso Robles and	6,40 p
10.30 ₄	For San Jose, Almaden and	4,36 P
12.01 P	(For Cemetery Menlo Park)	5.42 P
12.01 P	po and principal way sta. For San Jose, Almaden and I (Way Stations For Cemetery Menlo Park) and Way Stations For San Jose, Tres Pinos, Santa Cruz, Monterey &	
* 3,30 p	Santa Cruz, Monterey & principal Way Stations	10.02 A
4.30 P	(For San Jose and principal) (Way Stations	9.03 ▲
5.10 p	For Menlo Park and Way .	8.00 A
6.30 P	Stations	6.40 ▲
+ 11.45 F	/ Stations	
A for Mo	pal way Stations	ethoon.

A for Morning Sundays excepted tSaturdays only. (Sundays only.)

THE OLIVE.

A Practical Treatize on Olive Culture, Oil Making and Olive Pickling,

Adolph E. Flamant,

Of Napa, Caf.

Price, One Dollar.

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A MEMOIR ON OLIVE GROWING WITH ILLUSTRATIONS.

Read Before the State Horticultural Society, February 29, 1884, by

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FRED. POHNDORFF.



VITICULTURAL PAPER IN THE THE ONLY

Devoted to Viticulture, Olive Culture, and other Productions, Manufactures and Commerce of the Pacific Coast.

VOL. XX, XO 4

SAN FRANCISCO, MAY 25, 1888.

PRICE 15 CENTS

State Board of Viticultural Commissioners.

(20ntinued from the S. F. MERCHAST of May 1 1th

This list or ind x is far from complete of the work accomplished or inaugurat d by the Commission many valuable papers having appeared in the deily newspapers. that my limited time will not permit of finding.

At the time of the organization of the Viticultural Commission it was estimated that there was 35,000 acres of vines planted in the State. I am inclined to accept these figures as correct. Of this amount there may have been plant d as much as twenty per cent with imported varieties and the bulance with Mission grapes.

At the present date after eight years ex istance of the Viticultural Commission, it is believed that there are planted not less than 150,000 acres in vines and fully 90 per cent, of these are reckoned as consisting of the finer grades of foreign wine grape varieties, mainly drawn from France Spain, Portugal, Italy, Germany and Hungary. The result of the planting of these fine grade grape vines, has been the producing of wines of much better quality than had been hitherto produced, creating a revolution in favor of California wines and the conquest of markets that even the most sanguing among us never hoped to acquire.

From the very beginning the Commission, recognizing the value of correct statistics end avored to collect such as might show the true condition of the viticulture of our State, with this purpose in view circulars were sent out to all parts of the State, asking for detailed information on the rumper of vines planted in each district and locality, the age and varieties of vines planted; the number, names and post office addresses of the various vine grow ers of the different districts, and other matters of public interest and value.

Though this work was entered upon with zeal and prosecuted vigorously it met with only a partial success, owing to the many unreliable statements, received from some quarters, and the general unwillingness to ested. In spite of these difficulties, how-

Report of the President of the lable to secure the names and address of about (c000 viticulturists.

> The same work had been attempted by a number of people rater sted in vine grew ing, and quite recently again by the San Francisco Wine Dealer's Association, but each effort proved abortive. Nevertheless very close estimates have been made, or at least estimates that are needpted as closand with these in mind we can consider some of the points hearing on the pres of and possibly the future of this industry in our State. And, at the same time we can note the actual progress made in the sale of our wines at home and abroad, together with the prices ruling and total estimated values.

> To begin, I will assume that there are now plant d in California 150,000 acres of vines which will all be in full bearing within three years hence. Allowing these an average value of \$300 per acre without other improvements we will have a valuation of \$45,000,000. Or course there are vineyards not worth \$200 per acre but these are few in number and either planted with the Mission or some other equally common varieties of grapes. On the other hand many of our vineyards are worth con sideraldy more, than \$300, per acre which difference would more than balance the deerepancy of the above estimates. I reckon the value of the improvements necessary to carry on the vineyard business successfully at \$20,060,000. These improvements consist of fences, houses, barns, cellars, presses, tanks, casks, distilleries, agricultural implements and machinery, live stock, etc., etc. The two estimates thus made would place the present capital invested in viticultur in California at \$65,0 m,000 Comparing the present valuation with that existing previous to the creation of the State Boar L of Vittentiurs we are confrenerd with the following interesting results. 35 000 aeres in vines of which 80 per cent, were Mission grapes, at \$300 per acre, gives \$10,500,000, propertionate other improvements note sairy to carry on the vineyards, etc., \$1 0 m,000, total my stment, \$14.5 (0,000).

Thus showing a direct mercase of \$50,500,000 in the viticultural investments. within the last eight years, and of course yielding a proportionate greater meem by value of vineyard and configuous lands,

California that it has reaped and will con- ming of the see. . usu by r dize quite tinue to reap a very handsome meonie from the paltry sums given to support this Board of Viticulture. We may doubt of the win yearly a straid in this whether any private investment has ever s cared, such, golden returns, always, of course excepting the railroads and other transportation companies,

Within the past few years, owing to many contingeners, the production of our vineyards have not kept pace with the number of vines plant d in point of quantity. These differences are caused sometimes by either fall or spring frosts, or by both; sometimes by strong winds, sweeping over the vin yards while the vines are in bloom; then by the sunbarn, and other times by the visitation of p-ronospera, or kindred funcoid diseases. Even the grass hopper has had his sway, and with him various other bugs, worms and moths.

Bearing in mind, the rapid increase in vereage of vines from year to year, since 1877, we will be somewhat surprised to note the differences in the amounts of winproduced as shown by the following fig-

	Vintage.		Gals new
	1577		 1.000,000
	1 m7 m 1 m79		2 (мюјинг 5 (отојинг
	1 ~~1)	 	10,200,060
ĺ	1552	 	9 (000) 1000 9 (500) 1000
	1 mm25 2 mm3		10,000,000
1	1-46	 	11,000,000
	17		15,аооји а

From the number of vines coming into bearing we should have produced not less than twenty million gallons in 1886, and twenty-five million gallons in 1887. In alinding to the above estimates as wine. I desire it understood that they are reckoned at the first re-king of the newly fermented pure only. When the wine will have be one one year old, and fit for removal by the trid the above punntities will have very greatly disamished through natel ural shrinkage and a cabintal losses. Much of it will have spealed, and only fit to be used for making vinegar or turn lying its harvest for for in Is

Considerable quantities of wine or anmusliy made in this city by the Dahan, French, Spanish and Portuguese population, and either consum d in their win households, or sold in a small way to their give any such information by those inter- taxation to the State through the enhanced neighbors and friends. Large quantities fear among the neighbors, to v. ti. 10of grapes shipped to San Francisco are pretive vintege of 1887 which turn ever, the Commission has finally been And we might smallingly say to the State of thus done away with, and at the begin-

good prices.

It is difficult to make a classe stimute coast. I am bel to b new that not less than two malle negations are consumed in Sim. Francisco and Oak, and, and about three million gallons were in the mi rior of the State, in Arizona, Origon, Washingtod Territory, N vada and Utah. The amount exported to the U stars States and for ign countries in 1887, reached seven multion galous mer, giving a total demand for the year of twelve million gailous.

It chaning in the swell together with the dry wines this would give an approximate value of about \$4.500,000, and the brandy us do on this coast of exported would swell the amount about \$1,000,000 more, giving a consumption goal to

And right here it may be well to draw y ur attention to the possible value of the productions of our vin yards within the not three years. Assuming that our 150,000 acres will be in felt learing at the end of that time, that 15 mm, acres of these are planted for rusins, and 10,000 for raising table grapes, we have left 125,non series for wine and brandy midnig. These figures will yield us a possible one and a half million box's of raisins, forty thousand tens of table grapes for axport and home insumption fifty million gall are of wine, and one and a buff million gibous of broady. I very these as

It seems to be as it if to contlict the State of or erpme that in but.

The praces pad for whose dames past year railed hat the area large w There were to be a record stud ming problems, who mesto

This, however, not being the ease, prices have taken an upward road, and while wines of 1886 could have readily been bought at from 13 to 14 cents per gallon in August last, all that stock has been exhausted and the new wines of 1887 now readily command from 17 to 20 cents for the ordinary qualities and notably higher for the finer grades

The following are the average prices paid per ton, during the vintage of 1887 for the more prominent varieties of wine grapes.

Cabernet 82	5	to	\$3
Petit Pinot	.5	to.	- 3
Black Burgundy 1	8	to	-2
Mennier 1	8	to	- 3
Riesling 1	8	to	- 22
Mataro 1	6	to	1
Zirfandel 1	4	to	1
Carbono 1	3	to	1
Malvoise	8	to	
Mission	4	10	

It is of course understood that these prices varied in different localities conforming to the universal rale of supply and demand. It is a matter of fact as well as one for congratulation that the reputation of our wines is favorably increasing both among ourselves and among the wine drinkers in other countries. This is owing chiefly to the landable ambition of our wine makers not only to increase their knowledge in the modes of fermentation but also to their persistent efforts to se-care better quality, through the planting of vines better adapted to their locality and selecting the finer varieties of grapes even at the expense of quantity. To continue in that direction will, in the near future, find ns markets for any surplus we may have in Asia, South America, and even in Europe and were the Americans but wine drinkers at home, as they ought to be for their own good and the cause of true temperance, there would soon be no surplus at all.

Our increasing shipments of both winand brandy out of the State by rail and sea are showing to considerable advantage by the tollowing statistical tables that have compiled from the most authentic sources and after verification, arranged to give a clear comprehensive insight to the importance of this Board of Trade.

Receipts of California Wine and Brandy at San Francisco from the luterior.

Years.	Wine Gallons.	Brandy Gallons.
1875	1,995,629	52,036
1876	1,697,590	60,527
1877	2,336,653	126,324
1878	2,983,136	103,772
1879	3,364,607	93,506
1880	3,759,743	133,764
1881	4,937,876	157,083
1882	4,452,356	136,883
1883	4,838,623	131,711
1884	4,858,458	112,265
1885	5,895,100	157,752
1886	6,209,131	180,324
1887	8.496.344	256.104

55,825,276 Total The increase from 1875 to 1887 was 425 per cent, for wine and 492 per cent, for brandy.

1.702.051

The noticeable fluctuations in the amounts of brandy received were caused by the greater or less price that mine could command quite as much as to the scantiness or aboudance of the vintage

Years	By Sea Gallons.	By Rail Gallons	Total Gallons.	Total Values.	Average Price, cts
875	507,809	623,698	1.031.607	8029.219	=
9	516,269	208,776	1,115,045	691,327	2
[-	8946,346	566,116	1,462,792	R:33 791	1.6
x	1,238,626	573,533	1,812,155	987,626	
£.	1,399,094	756,850	2,155,944	1,171,989	5,5
ž	1,545,745	HE9 116	2,487,353	1,343,170	1.61
28	1,505,262	1,340,103	2,445,345	1,561,950	65.
Z.I.	1,365,177	1,451,558	2,815,735	1.11x 120x	199
ř	1,250,373	1,835,111	3,190,167	1.738,640	44
T	1,210,455	2,313,611	3,524,099	2,008,736	.5.7
HBC	1,196,297	3,059,927	4,256,224	2,234,517	100
Ť	763,099	4, 128, 223	5,192,223	2,959,567	10
T	1,958,032	1,943,739	6,901,771	3,140,305	152

I draw your attention to the fact that the declared value is not always the true value; had the time permitted I should have preferred making out the values in accordance with the average ruling prices of the different years. It is fortunate, however, that the above estimates are not very much out of the way considering that they cover a very large amount of sweet or fortified wines, such as Port, Sherry, Angeliea, etc.. and besides that large quantities of old and costly wines. You will also note the steady nuceasing gain of the rail transportation over that of the sea without a single interruption from 1875 to 1887. This is caused on the one hand by the increased consumption in the Eastern inland centers and on the other by an active and beneficial competition in the rates of freight between rail, steamer, sailing vessel, and a consideration of the important factors, time, interest and insurance. With quick and certain delivery the Eastern merchant can do the largest amount of business with the lesser amount of invested capital. It is the consideration of this fact that has caused most of our larger city and country wine merchants to establish branch houses in the most important Eastern centers of trade. They are thus enabled to make quick and satisfactory deliveries.

Years	By Sea Gallons.	Fy Rail	Total Gallons.	Total Value	Алегаде Рисе.
878	39,924	2,304	42,318	\$89,714	82.12
21:	64.940	2500	139,892	259,915	N -
100 T	91,324	07, X-10,	12 , 190	248,002	83
£	97,533	91,565	XS.O.SX	378,196	£ 5
zez zez	60,063	149,584	209,677	461	9
7 X	14,752	169,410	214,162	173 23H	2.21
EX:	35,194	1946, 109	231,303		
ž	18,931	202,934	221,903		2.26
X86	13,712	250,128	263,840	55-1,064	27.70
EEC	22,430	238,335	260,765	51× 922	1.589
t- T	60,572	412,180	472,752	774,3313	1 64
Total	EX. IX.	1,916,946	2,598,791	\$5,201,412	

The above table included all shipments to foreign countries and were such amounts considerable the average quoted would be over estimates for there is no brandy shipped to foreign ports that is not shipped in hond, and thus free of the Internal Revenue Tax of 90 cents per proof gallon. The only exception to this rule is such brandy as is shipped in cases, these are not within the bonding privilege, and it is a very great drawback to the brandy trade of our State that such privilege is not conceded by the Federal Government. Were we permitted to bottle our brandies in bond an enormous trade would spring up in foreign countries, especially those of Central and South America, Mexico, the Sand wich Islands, China, and Japan. These countries could thus also secure our brand. ies in their absolute purity, and would not he slow in their appreciation of that fact and make the most of it, both for ordinary as well as medicinal use. In the matter of transportation, the rail shows the most extraordinary increase over that of the sea, and if continued, as it must, it would take the entire brandy carrying away from the sea were it not for the slowly increasing trade of Mexico, the Islands and Central America, as will be bereafter shown. It is by far more satisfactory both to consignor as well as consignee to have transportation of brandy made by rail rather than by sea, for reasons already mentioned for wine.

CUTTINGS AND LAYERS.

A correspondent of the Citrograph writing from Spain upon this subject says: In the propagation by cuttings, choice twigs of the summer's growth are plauted either in November or February. In some cases the stock desired to be reproduced iplanted, but in Valentia cuttings are selected with an eye to other points, and grafted a year later, usually at the beight of about four inches. The method of layering is also practiced in Valentia, as it is in some other orange countries. As the Branch cannot be conveniently brought to the earth, the soil is carried to the branch by a simple system. A flower pot in two pi ces, or any receptacle capable of holding earth, is fastened about a branch of the tree. In the Azores they nae sacking formed into a fuunel shape. The receptacle is firmly lashed about the branch with strong twine or wire. A straight branch, two fingers thick, is usually selected, though in the Azores they some times take limbs of four or five inches The branch to be subjected to this precess should be cut down to about a yard or a little more above, the encircling vessel of sack. That portion of it which comes is the middle of the box should be barker for an inch and a half, and at once bound up with grass twine or other vegetable bandage. Fill the box with well mixed earth and stable manure. Keep it well watered and at the end of the year in should be nearly filled with roots. Then cut off the branch below the box and set out the new tree. If properly eared for, it will begin to fruit in two or three years. This system is also considerably in vogue in the island of Jamaies, but as it is practically a slow one for the multiplication of plants, it is employed rather by amateurs than nurserymen.

The profit from olives in Spain does not appear to be excessive. In some districts it is estimated at a little over \$2 an acre, while other figures are given as high as \$58 per acre. I have already mentioned the estimate of the Carcagente farmer as three per cent. But it is asserted that Spanish data are very unreliable. Estimates from Italy place the net profit all the way from \$20 to \$60 per aere. In some parts of Spain olives do not flourish near the sea. as the winds are two harsh. As to soil, it is laid down as a general proposition that what is best for the vine is best for the olive. It is recommended that when young seedling olive trees are planted out in the nursery they should be set in dry rather than irrigable land. The growth will be slower, but the trees will become the better prepared for transplanting to their natural home where irrigation is favorable.

Along the route from Bordeaux to Paris the red soil continued, "Redlands" strning ont nearly the whole distance of what is one of the most fertile districts of France. Vines were abundant, trained mostly on stakes three to four feet high. In the Medoe district the stock of the vine is usually six to eight inches long, and attached to a stake about fifteen inches high. To the stake, laths or wires are fastened which holds up the two arms of the vine. The branches are 13 to 16 inches in length and fastened horizontally to the laths. The best vineyards in the Medoc are said to be on aliotic subsoils, impervious to water, and hence inclining to be too dry

and these lands are greatly in demand. The gravelous surface soil is about three feet in depth. Prices are quoted by different authorities as from \$400 to \$4,500 per acre-the latter figures representing the vineyards at Chateau-Lafitte, and the net. profits as aversging less than 6%, but greatly exceeding this in the case of superior vintages of established repute. As far as Augouleuse, many fine vineyards, then corn, orchards, grass and general crops were seen. The cuttings show the red to yellow soil twenty feet deep, with not much gravel. Beyond Poitiers alfalfa and other crops with abandant irrigation, especially on grass lands. The best champagne vineyards (near Epermay) are on whitish soil. At Tours the train enters the valley of the Loire, and from there on runs through a paradise of gardens, vincyards, villages, villas, and cultivated fields. Near Blois the soil shows two to three feet deep on a yellowish rock. The vines on the hillsid s are staked up 212 feet or so. At Beaugency the vineyards are on light and dark brown soil, with some gravel, a strong land.

VINE GROWING IN PORTUGAL.

In most parts of Portugal, says a correspondent of the Citrograph, the vine is left ractically to its own devices as a natural reep r. The exceptions are chiefly in the Port wine district, the mountainous region sixty miles up the Dooro, and in some parts of Beira. The vines generally are let to grow their natural length, either on walla or on square trellises the height, or more, of a man above the ground. Often they are trained, in the old Roman style, upon trees whose leafy branches are trimmed to let in the annshine. This is considered by many to be the best system for a warm region like Portugal, while the French and and German bush system does better in a cooler country, where the refracted heat from the soil is desirable. It is considered that the long-trained vine produces more wine, and is safer from the attack of the phylloxera, because the roots push down below the reach of that pest. It is coneluded, however, that the shorter training produces better wine in most sases. The English consul at Oporto has recently made a voluminous report to his goverament on this subject, urging the adoption of the Portngese system by the wine growers of Australia. He says the natural "gadding" growth is the least expensive, the most productive, and the most reliable for dry weather crops. If the wine is thinner and less ripe, the taste for it can easily be cultivated, he argues, as it is purely an acquired and conventional one. This advice is hardly to be relished by wine growers of English stock, who naturally despiss a "thiu" beverage.

A BLOOMING DESERT.

The Colorado desert is probably destined to furnish early grapes for our Eastern markets. At Indio station, on the fifth of this month, the writer saw sweetwaters as large as peaa, and grape shoots from six to ten feet in length. At that time there was scarcely a blossom on a grape-vine in this valley. These few vinea, in the R. R. company's garden, are being earefully watched by San Francisco capalists, and some mammoth vineyards will probably dot that section of the Colorado deaert in the near Indio is a few feet below the fature. level of the sea, and water is struck at 100 feet which rises to within 20 feet of the on slopes and too damp in flat places. This surface. Last season, the sweetwaters difficulty is remedied by deep cultivation, were ripe on the first day of June.

WINES

Their Characteristics and Adulterations.

attentioned from page 11

The most proputious time for cutting th grape crop is determined by the naturof the wine to be produced. It may, however, he roughly stated as generally chosen in fine and very dry weather, at either the end of September or the commencement of October. For red wine it is customary to gather the fruit before the attainment of that point of maturity when the last trace of acidity itisappears; whereas, for whit wine, complete maturity and absence of all acid principles is an essential factor to suc cess. In most parts of France the harvested crop is thrown into the fermenting vessels without the removal of either the stalks the seeds, or the husks. This is a circumstance which exerts a variable and yet all important influence on the qualities of the wines. The stalks yield to the liquid a large proportion of tannic acid, or tannin. and a peculiar kind of latter principle; the seeds impart tannin and small quantities of fixed oil; the husks give a tannin of a special kind, together with large quantities of red, however, remain insoluble until a suffici-ney of alcohol to dissilve them has heredeveloped by the fermentation, and we may therefore produce outbor white or do pered wines, or any shale b tween the two, by either totally abstracting the husks from or leaving them in contact with the liquid during the course of this process. From a series of viry interesting analysis of numerous specimens of these grap skins, Berthellot has shown that they contain n arly twothirds of the total acid principle of the entire grape, and some late experiments of our own have more than confirmed his theory

to us, from which we express d five gallons, in the mass of skins which had been submitted to very heavy pressure, we found no great importance, and d serves thoughful attention, in ismuch as it proves that in addition to their inflaence in the matter of color, the channation or otherwise of the skin from the must, necessarily moden's the composition of the wine. If they are withdrawn immediately after the juice has been pressed from the fruit, the ferment d liquor will be of a lighter shade, and, containing less tartaric acid, will have a lesser tendency to deposit or acidify. The practice of making red wines from completely mature fruit has been definitely abandoned by the most intelligent producers, because our enquiries into causes and effect have enabled us to demonstrate that such wines are invariably too sweet, that they lack davor and boquet, contain little tannin, maintain a slight turbibity, and have no keeping qualities. A mere glance at such wines as Tokay, Muscatel, Port, Frontignan, or the products of any extremely warm climits -Sicily - Spain - Portugal will exemplify this fact. The inhabitants of such countries are naturally of an indolent disposition, and, unimpelled to exertion by any of those necessities so essential to the natives of colder regions, find their chief enjoyment in the dolo for niente. They have never been in any hurry to gather their crops, and have not only allowed their grapes to mature but even, in some cases, to partially dry up before cutting them from the branches. The result has been the production of wines, which it would be almost more rational to tuns which will not require more than one

call liqu nrs, which are only drank in very small quantities at desert, which council be regarded as wholesome, and which study find flavor or appreciation among women and children. To the concessour they have of course, no value, and with the proges of education and taste, they will be more and more disclaimed by these vintages of the Bord- aux and Bong only type, which, has b from unripe fruits, are charished by all tralovers of wine for their expuisite theyor at it delightful fragrance.

To avoid a discussion of the evarious

modes ad 94 d for cutting, 2 dir ring, and housing the crops, which though into restrog to cursoves, might prove t house to readers and therefore out of price in th essays, w shall assume that everything in this regard has been will accompashed. and that the crop has arrived without as cilent at the sheds or war house. Having been east into the fermenting tuns or tanks its subscount treatment will depend up as whether we wish to produce white or rel sweet or dry wines. Let us end avor to somewhat familiarize ourselves with differ ent modes of treatment. In many red wine countries it is usual to detach the borries from the stalks before attempting to express blue, and yellow coloring matter, and their junce; in other districts this detail is cream of tartar. These coloring matters, in-glected. In all cases, however, the husks remain in contact with the liquid the time of their sojourn being determine or regulated by the shade of color required For very dark red wines, they are main tained beneath the surface of the fermions ing liquid by a network frame or cover placed within the tun some inches from the top. This is probably the host system we have seen; it is certainly sup rior to that provalent in Burgundy, of repeatedly break ing up the soum in order to resubmers the skins that have been brought to the surface with other extrans as matters by the escaping perbonic acid gas. Burgundi-Some California grap's were submitted ans argue that they produce a desper and much finer coloration, but we are person ally convinced that even if this be the fact (which we do not adout , they als ; induce less than 160 gramme. This fact is of v ry a tendency to rapid acidity from the causes we have referred to, and hence all other advantages are more than counterbalanced, The preliminary mode of treatment in white wine regions is essentially different from all this in every particular. Nor does this depend upon the color of the grapes themselves, since many of the deep red species (such, for an example, as the Boorgiguon of France's serve as the basis of the basis chambagh s in the markets. To produc white wines, the husks, stalks and solds must be entirely removed from the jaice, and in order to effect this, the grapes, in stead of b ing tramped with the feet or oth rwise to at dies miss, an always submitted to pressure in a wine press.

Adhough the ordinary forms uting vessels or tuns are commonly made of cak, it is not unusual to meet with large brick-work tanks bunt especially for the purpose and lined with Pertland coment. This latter, however, is a medern introduction of very doubtful value, and is, in our opinion, to be deprecated, not because there is immediate danger of the coment becoming soluble in the wing, but because we have found that, in practice, it off is obsticles to the separation and deposition of the tartar The tun or tank must, of course be left open at the top to allow a free passage to the escaping carbonic acrd gas, and should never be of too large or unmanageable size. In our own experience, we have

day to fill. With nothing pager than this taneity of action through ut the mass, prof. to a dissort and what either at commencement or at the end of permy closeless and some litharvested during extremely werm weather, aroung the formentation process is, of this form nation commences ranged at tyafter they have been cut, and, with peopler subsequent regulation of the temperature, has been treed root workly determined should be in full activity at the end of eyeth errom ter . 24 h brs. This regulation of the tempers and a separated with resource atur, therefor, becomes a very important rersecond partial or with long elservation and experience, that it is an either to ray inequilibrium the Lorentzian proper to commune at 55 deg. Ethr as a such positry for A should minimum, i sth. for the must an i for the surrounding atmosphir, and that the inquist itself should never be advised. o exceed a maximum of 90 deg. Paler, burning sulphur main hat sy-Beyond this point the good sea are from a said thousand a stream from the form to anpes d in other substances than are diel, and purify r. In the district of Frontizion, near growers in France are very simple. They provoke a free draught through their sheds | inhe aithy and that it had leen aband ned. or tanks with cold water when the atmosphere is very warm, or surrounded them highlat a convenion period of the process, ets when it is somewhat cold.

sugar to be transfermed, from four to age units, which, speaking in a general in unadulterited grape the furing the fitte nall advantage, but, on the contrary, the knowledge and attention of air result is have invariably either seriously impaired man we have right to on, iso or along their spotted the quanty of our consequently content ourselves with the atwine. The exact time at which the for a mpt to convey a general object of the conmentation ceases is very easily determined. it is evidenced by many commonplace signs, and is recognized without the aid of any scientific knowledge. There is therefore no bigitimate excuse for any gross mistakes ven when they are mad by the most ignorant of the peasantry. All those who have ever made wine on a large scale, have observed that when the fermentation sets in, the escape of carbonic acri gas, caused by the decomposition of the sugar, is s abundant, as to make the whole herror bub ble up as if it were boiling. In proportion as the sugar is distroyed the elevation of the gas decreases, until finally it is altogother suppressed; while at the same time the large mass of frothy seum which it has to rise up with it, being no longer sustained. Hapses and falls flat upon the surfac-

A companying this intidials indication is the no less certain to dimensy of change in temperature, which when the chemical a tion has come to an end fall's to the surrounding air. Should nother of theproofs be do ned sufficient the test sportio gravity will settle ale donlits, for with the acquisition of all all and the less st sugar, the weight of the liquid will have been so lemmished as te show no mere, and perhaps even less than or when tested is health, the light was let in with B aume's aroometer. These remarks to make them to show that the natural fer- int all disc for most composed maters mentation of grape pines is a very simple process devoid of all technicality, and that

triffly. With nothing larger than this carried in in France at 1 G (may y, by the weaver been able to ensure small chamberst entirely of the sound of the form numbers. In grap's that have I on Type mechangings the meth 1 of our carso, ontropolation to The was to run off as some as her the sagar its in, and it has in fact by a providity that from a high vesses into a maker one, ons . . I as a storther point of the lighter. or it is consiste materials for this purpose be not it hand, made to make a with it by the latt r body itself becomes volatilized the well-known term of Citt, to Frence, and passes away in the form of vipor, with lonce so fam as for its Millert, but now, the carbonic acid. The arrangements as to like so many districts, levistated by the temperature, adopted by most large wine phyll x ra, we found that this killing of all germs by sulphur as and was regard dias or collars, and constantly sprinkle the tims. It is professed to stop to if it, intation by adding a given quantity it also held to the with either planted straw or woolen blank-jund then to draw off the win suited above them to clarify in soperate vals. As to the The duration of the primary or, as it is commentability or oth rwise of any of very aptly called, tuminations formentation, these practices, we small hat splenty to say varies with the temperature at which it is jut a rater stage of our discussion, for the allowed to proceed and with the amount of present we prefer to address ours beschist of all to an inquiry into the nature of the twelve days. This at least, are the aver- chemical and physical phonomena induced way, have given us the best results, and, various processes with a six agbly outalthough in some special cases we have lined. To entire in the entries of such followed the advocates of a much longer a quistion would be finise and printless. period, we have never derived any adepand would necessitate a greater tax of n

isions that a coughly exponence has ensolod us to form. The rough in I ready, or presso to do explanation of the chief reactions has hitherto been, that the principally important change from must to wine results from the transformation of the glue so into alcohol and carbonic weel. Like most ther explanations of a similar superficial character, this one, what street v founded upon fact, is sufficiently incomplete to be not only worth's so but alt ghother mash ading to the summitted little ricity, is the givered by modern science, is thirt, pressure ing two parts of sugar are expedit of prilung one part if do hill, there is now r chough spirit found, by a lifer the most orgist, and rugthy form at drop, to seand for more than \$5 or at a recognition in the of the wight originally contained in the grape since. As from I to 4 per ent invariably remained and the Limithwine and as it is governly all a 1 that say one per out may be set in the form for aporated as he middle vigity the per ant, must have collected as in other charges. Ast what this were the a is in littler darkness, intiwhen, thanks to Past in in I to missing link was found. W are necessarily brief, they may perhaps be that these per integes if sight are far from superfluons, but we have been induced being est that they have be a transformed the very believe in fact, which give to

wines their most any crying and distinctive met with the best results from the use of the manufacture of excellent dry table wine i.h. cracteristics. It is by the ct. by and the I can be carry 1 on here, as it has long be in recognition of these existing a by intal-

establish the standards of quantity to which we have referred, and it is their absence. or excess, or existence in amnatural proportions, that marks the distinction between a natural and an artificial wine. Let us try to make this still more clear, in order that we may completely understand why recourse to analytical chemistry has at length become a factor and a nocessity in the wine

VEGETABLE RESOURCES OF THE WEST INDIES.

Address by Mr. D. Morris, M. A., F. L. S., delivered before the London Chamber of Commerce

For the last ten years I have been closely connected with the development of subjects of a botanical, horticultural and agricultural character in the West Indies, and I am glad to offer a contribution towards a better knowledge of the circumstances of these islands. I do this chiefly, in the hone that a consideration of these circumstances will enlist the interest of the London Chamber of Commerce, and of other bodies in this City of London whose concern is to deal with the productions of plant life.

I purposely confine myself to speak of the vegetable resources of the West Iadies, in order that my remarks may be wholly directed to this particular department in which I have chief knowledge and experience, and also that I may at once indicate the direction in which I believe the future prosperity of these islands to lie. The mineral resources of the West Indies appear to be comparatively unimportant. The true wealth of these islands evidently is bound up with the products of the soil, and in such horticultural and agricultural pursuits as are directly connected with plant life. This has been so in the past, and there is every indication that it will be so in the farme.

The present condition of productive industries in the West Indies is addinitted to be far from satisfactory. It is needless to dwell on the political, social and fiscal conditions which have operated to bring about the depressed condition of these industries. It is more to the purpose now to realize that these islands are geographically so well placed as to be within reach of the best markets in the world; that they possess both soil and climate that are possessed by few tropical colonies; that they are inhabited by a laboring popnlation rightly controlled and judiciously managed, capable of producing ten times their present exports, and that they have England, the richest country in the world, to aid and support them. If they once realized these facts, and overcame the spirit of despondency which has so long possessed them, their condition would soon be improved.

These are the nearest of our tropical possessions, as also the oldest. In the past they yielded such wealth as greatly contributed to make the mother country the commercial mistress of the world. But this wealth was yielded under circumstances which were exceptional, and which have now entirely passed away. They had a monopoly of the markets of the world. "Prices then ruled artificially high as they now rale artificially low." But, although the markets for West Indian produce are so greatly changed, it must be borne in mind that the islands themselves as regards the capabilities of the soil, their

ing tests that we have been enabled to are exactly where they were. Under ordinary conditions the keen competition of tion may be as keen as ever. A hope is by cultivation and experimental processes, to-day should not affect the West Indies more unfavorably than it affects other tropical countries. The chief is ason why the competition is more severely felt in the West Indies than elsewhere is to be found in the fact that they have most bravelybut in many respects most unfortunatey-staked their prosperity on an industry which brought them into competition with countries equally well placed with themselves as regards soil and climate, but perhaps better placed than they were as regards capital, as regards labor, and such mechanical appliances as were specially suited to the industry. If they had had other large industries to full back upon, the depression in one would not have been so severely felt. But the whole attention and energy of the islands had been so long devoted to the production of sugar, that was not surprising that they could not easily change. Even at the present time a capital of something like fitty millions sterling is said to be invested in the sugar industry of the West Indies, and it would be folly to suppose that this capital should be sacrificed unless it was felt to be absolutely impossible to save it. I fully recognise the fact that the chief business of the W st Indies is that of sugar. I also realize that the people are naturally reluctant to relinquish as indus try, which, in the course of more than a century has become thoroughly established among them. They are familiar with all its details, and much of the sea-board land in the West Indies is perhaps better adapted for the cultivation of the sugarcane than any other plant. Having admitted so much, it is, however, impossible to overcome the plain teachings of facts. No colony or set of colonies can nowa-days be permanently prosperous if entirely dependent upon a single industry.

> There are now such rapid developments in production, while distribution is so highly creanized by means of the telegraph and steam navigation, that a good market anywhere can remain good only for a certain time. Good prices quickly stimulate increased production is tropical as well as in other industries. Hence it is more important than ever for these islands to provide for the fluctuations in prices, and fortify themselves against a falling off in demand of a single product. This can only be done by a variety of cultures. This, I venture to believe, must be the future policy throughout the West Indies.

It is necessary, however, as a first step, to place the sugar industry on a satisfactory footing. If, as there is every probability now the continental sugar bounties are abolished, the West Indian planters will feel that one at least of the depressing influences, with which they have had so long to contend, will be removed. It is too soon yet to estimate exactly what inflaence the abolition of bounties will have apon the sugar industry of the West Indies. It is evidently a step in the right direction, and those who have taken part in the negotiations, and assisted in securing the results so far attained, deserve the thanks of all colonies interested in the sugar-cane industry.

We may assume that eventually a better market will be obtained for colonial sugar. It would, however, he very unwise to count too much apon this. The area of production of cane-sugar is now so vast, vailable labor, and their general resources and it is capable of being so easily in heneficial in other plants. If the sugar- are so well understood in the West Indies

it is thought, might be disposed to admit | means of benefitting the industry. West Indian sugar free or at a reduction of duty, on condition that the Islands removed the duty on American food stuffs. Probably the islands by such a treaty would gain more than they would lose. It must be remembered, however, that cane sugar is being largely produced in the States already, and that the cultiva ion of heets are now being attempted there. We have heard also a great deal lately of Sorghum sugar. Of the future of this we know nothing. It is possible, therefore, that the American market may not prove so advantageous to these islands as is now

Apart, however, from the abolition of sugar bounties, and securing a reciprocal treaty with America, it is well to point out that a permanent improvement in the sugar industry of the West Indies is a matter very much in the hands of the planters themselves. By planters, 1 include proprietary interests at home, as well as those resident in the Islands. Many efforts have already been made to economize the cost of production. But in all the islands there is necessarily a concentration of all the purely manufacturing processes of sugar making, under what is known as the Usine system. This system possesses the merit that it keeps the purely agricultural work of growing the canes distinct from the purely manufacturing process of making the sngir. Where a large sugar making factory is worked with the best machinery and highest scientific knowledge, finer and better qualities of sugar are produced, while the cost is di- $\ \, minished.$

At present, every small estate carries on its own process of sugar making. The machinery is often primitive, and the quality of sugar necessarily low. If groups of estates were formed to grow canes, and sell them at a certain rate p-1 ton to the Usines, the results would be most beneficial to all concerned. Usines are already in existence in Trididad, St. Lucia and British Guiana. Many could be worked in Jamaica where at present not one exists. In all the islands the Usine system offers a solution of many problems connected with the West India sugar industry. Should there be a revival in the industry, this is one of the first points that deserves attention. There are, of course, many isolated estates where the Usine system is not practicable, and in Jamiaca there are estates making the best qualities of rum that would possibly find the Usine system altogether unsuitable.

Much of course depends on the kinds and varieties of canes kept under cultivation. The West Indies have been singnlarly free from diseases amongst canes. No destructive fungoid or insect pests have appeared among them as in Mauritius and other sugar producing countries. canes have been hardy and productive. Local deteriorations have no doubt arisen through poverty of soil or other unfavorable circumstances. This latter has been sought to be met by the introduction of new varieties of canes from other countries. It is well known that the sngarcane does not produce seed, and hence it is impossible to improve it by any pro-

creased, that in a few years the competi- cane was capable of being improved purely still, I believe, entertained of a reciprocal like those which have improved the beet, treaty with the United States. The latter, this would be one of the most effective

> New varieties amongst sugar cases arise generally in the form of bud variation. These occur very seldom, and possibly amongst several thousand acres of canes, not one case will be detected as exhibiting any, well-marked characteristics. Planters, however, should be keen to mark any canes that show a departure from the types, and caltivate them separately.

At present we have to fall back on the varieties of canes possessing certain wellmarked qualities which have arisen under natural conditions in other countries, and we introduce these in the hope that they may prove richer in saccharine properties, than those already caltivated. The rest is in the bands of planters, engineers, and chemists, the latter of whom are especially charged to extract from the cames all the sugar they possess. This problem has not yet been solved in spite of all our applinces. Possibly at the present time no part of the world is so well provided with different varieties of canes as the West India Islands. Since 1870 an experimental plantation with some 90 to 70 varieties of ngar canes has been maintained under he charge of the Botanical department of Jamaica. The canes were obtained direct from Mauritius, Queensland, Southern United States, and some from Kew. These were grown in quarter or half acre lots. Their characteristics were noted, their merits carefully invested by planters and chemists, and the results published for general information. This experimental plantation, maintained for 18 years, is still in existence. The caues grown and propagated at Jamaica have been distributed not only in the island itself but throughout the West Indies. It is necessary here to emphasise the fact that since 1870 numerons varieties of sugar canes have been introduced by the Jamaica gardens; they have been propagated by them and distribated by them not merely in a cane or so of each variety, but in qualities of hundreds and thousands to individual planters. At the Trinidad gardens the experimental culture of new canes was began in 1872. In 1884 farther supplies of new canes were received from Kew and distributed in the island. At British Guiana in 1881, soon after the gardens were started, new canea were introduced for experimental culture, some by the Government and others by the Hon. A. C. McCalman. The Government analytical chemist has carefully examined and reported upon them in a document of considerable interest and value. The Botanical station at Barbados, established in 1885, with about 90 acres of land attached to it, has been wholly devoted to the experimental cultivation of new sugar canes. These were received from Jamaica. The experiments here have been directed not only to the relative merits of new and old canes, but also to the effects upon them of certain manures. The reports have been prepared with great care by Prof. Harrison, and published by the Government of Bardados, and widely reproduced in the press. This is a brief outline of what has been done from the botanical and chemical side to aid sugar planters in the West Indies. It is a record of service which, as far as I am aware, is unique in the history of the sngar-cane incesses of hybridizing and crossing found so dustry. The details of cane cultivation

variety of canes are well able to grow them and indeed are in a better position to judge of their actual merits than any one clse.

Although the native flora of the West Indies includes many valuable plants, it is remarkable that nearly all the vegetable productions of these islands at present are derived from exotic plants introduced from elsewhere and kept under cultivation. The sogar caue itself is of Asiatic origin. Itintroduction to the West Indies is clearly traccable in historic records. What is called Otaheite cane, also known as th-Bourbon cane, was introduced to the English islands at the end of the last and the beginning of the present century. Captain Bligh brought the sugar cane and bread-fruit from the Pacific in His Majesty's ships in 1796. These and other plants on arrival were carefully tend d, and distributed from the Jamaica Botanic Gar dens by Wiles, a gardener selected by Su Joseph Banks. The introduction of coff to the West Indies we owe to the French Legwood was brought from British Hon duras to Jamaica by Dr. Burham, a botanist, 1715. The export of logwood from this island now exceeds that of Hondaras and amounts to £190,000 annually. Dr Clark, the first islaud botanist, brough with him to Jamaica the injube tree and the champhor tree. The first mango plantwere brought by Lord Rodney, while Dr Marten in 1785, introduced the clove and black-p-pp a, Jamaica ginger had its origin in the East Indies. Cacao is indigenous to none of the islands, and in Jamaica, at least, owes its recent increase in culture to the action of the Botanical Gardens The first seeds and plants of cinchona and teacultivated in Jamaica were sent out from Kew. Numerous fibre plants, cardamoms, peppers, india-rubbers and spices have been supplied to the islands through the instrumentality of Kew and distributed by the local gardens. The records of these and similar introductions are easily accessi ble. There are mentioned here only for the purpose of indicating the important part which introduced plants generally have taken in establishing successful in dustries in the West Indies.

With the exception of pimento and some timber and dye woods, it may be generally assumed that all the industrial plants of the West Indies, as we know them at present, have been brought from other countries. Hence we realize the useful character of the duties assigned to the work of introducing and distributing such plants. It is only by such means that the islands can be supplied with the best sorts and kinds of plants suited to their circumatances, and they can be so equipped as to hold their own amidst the keen competition of other countries.

For such purely agricultural communities as exist in the West Indies, a well organized and efficient Botanical Garden is by no means a luxury. It should rather beregarded as a necessity. It may be useful to state what are the functions of such a garden. The work undertaken by it should be primarily of a sepatific character. It should devote itself to the investigation of the indigenous plants of the islanti, and to their proper identification and classification. It should supply information respecting those possessing medicinal, economic or industrial value, and keep records of their uses. It should keep both living and dried specimens of such plants con-

done as regards the native plants, a botani- to botanists for their initiation and developand exchanges with kindred institutions the results are no less striking and suggesshould introduce valuable, rare and despitive as regards the possibilities of the sirable plants from other countries, and enlinate them for the observation and instruction of the inhabitants. On the purely practical side, and where other means are wanting, a well organized garden should raise valuable plants by seeds and cuttings, and distribute them with cultural informtion for the purpose of establishing new

whole of the West Indian islands possessed only two Botanical establishments, one at Jamaica and the other at Trimdad The gardens at Jamaica were established in 1774, and the records of their usefulness luring more than a century, fully justifies he important place assigned to them. To apply to them the words of Bayan Edwards they may couppied subsistence for future p to rations and furnished fresh incitent, hts o industry, new improvements in the arts of cultivation and new subjects in commoree." I have already alluded to the an arkable results which followed the inroduction of logwood to Jamaica. It may be useful to refer to another industry practically created by the botanical gardens. In the year 1824, it was laid down as one of the objects of the Botanical Garden at Jamaica, that it should devote attention "to the investigation of many unknown native plan's of the island, which from is reasonable to refer would prove highly henefical in argue uting internal resources medicine, or for manufacture . . means of which great commercial advau-

dimensions. The report of dye-woods in pended entirely on its own resources 1870 reached a gross value of £112,313 Similar results in more recent times have stations are already established at Barbatotal value had increased to £273,531.

now being used to improve the circum- prising Dominica, Antigua, Montserrat, stances of the West India islands by means St. Khitts and N vis. and the Virgin mands of the out-r world.

The services of botanists in creating imveniently at hand for the use of those who less than the valuable tea and einchona off from all means of starting new industry are old.

cal garden by means of correspondence ment. Few realise these's rvices, but future.

What has been done by the Botanical Gardens at Jamaica, and is being done by the excellent gardens at Trinidad and British Guiana, indicates a viry important | beauty means whereby the other islands may be b nefitted. The latter islands, it must be remembered, are small and comparatively isolated. Their smallness and isolation Up to within the last ten years, the have, indeed, been the chief operating causes in their backwardness. To assist them in dev loping industries suited to their circumstances, a scheme of Botanical Stations has been divised, which is now partly in operation. This scheme was first suggested in the Report of the R yal Commission of 1883. It was strongly supported by Sir Joseph Hooker, and accepted by the local bigislatures with the approval of the S eretary of State for the Colonies. The scheme previded for the establishment, in each island not alr ady supplied with a Betanical Garden, of a small mexpensive establishment called a Botanical Station The d tails of the schom have been already discussed, and may be known to many

The chief points involved are the maintainance of a nursery and a depot for plants in each island, and the diffusion by means of bulletins of practical hints as regards their treatment and cultivation. The stations would be affiliated either to the the properties of those already known, it Botanical Gard us at Jamaica or Trinidad, and it would receive from these gardens seeds and plants on payment in accordby supplying various articles of food, for ance with an established sch dule of by prices. It may be gathered that such a scheme of botanical stations for the less r tages might be obtained; among others, West Indian islands seeks to meet the the various vegetable dyes claim particular special circumstances under which they attention as promising a frontful field of are now placed, and to do so in the most flexible and economical manner. It is It is interesting to not, that while no evident that by the adoption of such a dve-woods whatever were exported from scheme, which practically amounts to a the island in 1924, a small trace of the botanical federation for purely conomical value of £1,850 was started in 1833, which, purposes, these islands will be anabled to since that time, has steadily increased, act much more thoroughly and economiuntil now it has assumed relatively, large cally, as a whole, than if each one de-

The gov rument of Jamaica has cor-("Jamiaca Handbook," 1881-85, p. 375 . dually given its assent to the scheme, and attended the increased attention given to dos and St. Lucia, and a botanical garden the cultivation of fronts that have been at Grenada. Unfortunately the island of neglected in Jamaica. The export of these St, Vincent and Tobago, which most re-Botanic Gardens, specially charged with in 1875 amounted to £14,912, in 1884 the quire the services of a botanical station, are said to be too poor even to afford the Results such as these, although obvious-cost of so moderate an outlay as is here ly of a special character, justify the attempt involved. In the Loward islands, comof the extention of botanical efforts. They Islands, although the scheme was accopted afford also a striking instance of what is by the local legislation in 1855, it has not capable of being accomplished in thes yet been put into force. The backward islands, when careful investigation and condition of Dominica, which is third in year as the first. The length of time for judicious and enterprising efforts are come size of the British West India Islands, is bined to fit local circumstances to the dessimply deplorable. The great part is still siderably, according to the conditions unopened forest. It possesses such not ural resources of soil and climate, that erably dry place is the best for the preportant industries have not usually re- nothing is wanting but the right application of seeds, moistart and varying coved the attention they deserved. We from of capital and energy to make at one hear a good deal of what engineers and of the most prosperous of our tropical de apper, carret, corn, eggsplent, ekra, salsichemists have done, but the work of botan- p indence is. It means are said to be senfy, thyme, sage and inhabitle are safe for ists is apt to be overlooked. In mearly all low at present as not to adant even of the two years, asperagos, endived between parsour colonial possessions whose prosperity simplest attempt being medicated velocity, spinned, relish, are safe for three is based on agricultural pursuits, botainsts, local industries. The Le ward islands years croccoli, cauliflower, cabbage, celety, have been the pioneers in wresting from should possess a well-rganized Botanizal turnip, are safe for four or five years, beet nature some of her most joilously guarded. Department similar to Jamaica, and Trina-cucumber, melon, pumpkin, squach, and secrets. The industries of the West, no dad. At present they are completely cut tomato socks, will grow when six to ten

that the planters once supplied within good desire to study them. When so much is industries of the Last, are largely indebted tries, and the local policy which has thus isolated and crippled them, is alone responsible for their present unsatisfactory oadih ai.

> I conceive that no mission could be nobl r and worther for those interested in these is inds, than to bring a prosperity to them at all proportionate to their resources of material wealth and naturar

> > (To be Continued)

WINE AS A BEVERAGE.

Dr. Felix L. Oswald, in Popular Science Monthly, says: "It is, indeed, a remarkable circumstance that in the home of the best wine-grapes in Greece and Sonthern Spain, draukenness is far less prevalent than in Scotland, or in Russia Poland, where Bacchus can tempt his votaries only with nauseous vodka." To this very significant observation, from a great anthority, it may be added that intemperance, in all grape producing and wine drinking conntries, is far less than in the non-grape producing, and rum, whiskey and gin-drinking countries. Therefore, all rational temperance men, like those of France and Germany, should advocate wine as a beverage, to the exclusion of distilled alcoholic liquors; and, like them, whenever it may be necessary, pledge the people against their uses in social life, as prone to lead to appaling abuses, such as now disgrace, in many nations, including our own, the civitization of the age in which we live.

BELT SUGAR IN EUROPE.

A continental authority has calculated that the production of sugar from beet root grown in Europe during the year 1887 will show a very decided reduction on the previous year. From the figures for the past year-which are of course, more er less approximate—it is calculated that 275,000 tons less of beet root has been grown in the best root growing countries of Europe during 1887 than in, 1886. The decrease is not confined to one country, but is general the single exception being Belgimm, which has, it is estimated, produced 100 000 tons last year, as against 91,000 tons in 1886. In G rmany and Austria the decrease amounts in each country to about 100,000 tons. Russia shows a deminished production of 75,000 tons, while France, more fortunate, comes within a few thousand tons of the previous year. The total production of beet root in 1886 was 2,625,000 tons, and last year it is estimated the crop will not exceed 2,35 (900 tops,

Vitality of Seeds.

A horticultural authority tells us that seeds will germinate as freely the second which seeds can be relied on varies couunder which they are kept. A cool, modtemperature are detrimental. Beaus, peas, TREATMENT OF THE VINE DURING ducer, but which have no bearing whatever VEGETATION.

Varieties of Vines to be Selected for Cultivation.

Each variety of vine generally preserves its main characters wherever it can be planted so as to produce fruit. Its principal characters appear also in the wine mulfrom that fruit. Exposure, territory, and climate may make a vine poor or rich, but it will never transform it into anything else; the Muscat will not become Cabernet, the Pineau will never become Gamay, the Riessling will never become Chardenay or Tokay. Notwithstanding this remarkable and unquestionable fact, the idea that the variety of that plant governs the product has always been applied only to the socalled great growths. As Guyot expresses it, the idea of the growth has absorbed the idea of the vine, while in reality the vine Plant Chatean Latite with Gamay or Gousis, and you will have a detestable wine. Substitute the Gamay for the old vines of the Clos Vougrot, and you will have wine at 60 fraucs the piece. Take the Cabernet Sauvignon from the Haut Medoc, or the Franc Pineau from the Bourgogne, and plant it at Madeira, at the Cape, in Spain, in Algeria, or at Auxerre, and everywhere you will obtain excellent wines, which will recall the wines of those countries from which you have taken the plants. The exposure, the climate, the high cultivation, and the mode of making the wine will of course influence their lightness, their richness, their taste, and their bouquet; but the Pineau, wherever grown, will reproduce the qualities of the Burgundy wine, and the Cabernet, wherever grown, will recall those of the Medoc. The Riessling, whether grown on the Rhine, in the Tyrol, in Croatia, or at the Cape, will always recall the qualities of the wine of the Rhine. The Due de la Vittoria, Espartero, caused Bordeaux grapes to be planted in his vineyards in Navarre. The wine there produced is true wine of Bordeaux as to taste and richness, but it has an after taste which is sour and bad, and which is found in most Spanish wines, This taste is produced by the methods of preparation and keeping adopted throughout Spain. In the Auxerrois there was a remarkable observation made in the year the vines in that collection for botanical 1858. The wine made from Gamuy was sold at 50 to 60 frames the piece of 250 litres, while the piece of the wine made from Pineaux was sold at from 300 to 400 francs. It has been alloged against this experience that the Pineaux was grown in favored slopes, but that is really a groundless objection. The same slopes, if planted with Gamay, would soon loose their reputation, and their wine would sell at perhaps 15 francs higher than the Gamay wine of common vineyard. It is therefore quite properly that Guyot insists, and we insist with him, that each wine, no matter from what country it comes, should carry with it the name or names of the grapes from which it is made. Thus one should never say "wine of Burgundy," but "wine of Pinean from Burgandy." One should not speak of "Bordeaux wine," but of "wine of Cabernet from Bordeaux," or "wine of Verdot." One should speak of "wine of Fins Plants of Champagne," and not of "Champagne wine." In the Bourgogne there are produced, side by side on one and the same slope, excellent wines from good varieties of grapes and bad wines from bad varieties of grapes. These varieties are frequently mixed in the vineyard which that you can get in your neighborhood. he was, indeed, proud, as well he might that you can get in your neighborhood. he was, indeed, proud, as well he might last year.

on the ultimate product as regards the consumer. The Germans have practically recognized this long since. They call their Riessling wine "Riessling," in order to make fully sure that it is to be understood that this wine comes from Riessling only. The Germans also speak of "Tromine," and we may rely upon it that these are pure wines, because their characters are so striking, and an admixture of other grapes would produce so infallible a deterioration in the quality that only folly could think of effecting such a mixture. If we consider the great growths and the history of their establishment, we shall always find that they were originally produced by intelligent persons who planted favorably situated vineyards with excellent vines. The excellence of the produce was gradually ascribed to the situation only, and the effect of the particular cultivation of the species of vine grown was forgotten. We hav now to do the reverse. We have to wake up producers, wine mer hants, and consumers to this great law, that the variety of the wine determines the the quality of wine, unless he has, at the same time, a gnaranteed statement of variety of vine from which this peenliar wine has been made. We therefore advise that the finest variety of vines should be planted in all places where it is intended to establish new vineyards. No producer needs to fear that the finest varieties will give him less produce than the coarsest, if he will carefully adopt the method of training most adapted to each. During this century many attempts have

been made to determine the relative value of the fine varieties of vines. In the vest 1819 the Duc de Decaze founded the Ampelographic School of the Laxembourg under the direction of Mr. Hardy. Here there were brought together varieties of vines from all parts of the world, but it was found quite impossible to make use of any of them. How is wine to be made from two plants, and how can the value of a plant be determined except by its produce, well treated and well matured? The colits viticultural value was nil. We have ourselves carefully examined the whole of and special chemical purposes; but we are nevertheless obliged to say that it has never inlittled any of the intentions which were connected with its establishment. Viticulture remained the same throughout France, and even the propagation of good or had vines were left uniuffuenced by this great effort of Decaze. This collection of vines was imitated in various parts of the world. There was one made at Baden, and another at Heidelberg, in which Metzger, the botanist, took so distinguished a part, and which has served as the basis for the monograph ou vines by Von Babo. There is a collection at Gartz which was made under the auspices of the late Archduke John; and another at the Closter Neuburg, which serves as the botanical school'of the Agricultural Institute of that convent. All these have undoubtedly augmented the knowledge of vines in general, and many intelligent persons have thence drawn stock which they have multiplied to advantage; but on the whole, vivification has not been thereby improved to the desired extent.

Guyot says to viticulturists: "Plant your new vineyards with the finest vines

well in your locality. You know their qualities and faults better than the propricties or men of science. Take the best plants, cultivate them carefully, adopt the mode of cutting which makes them fertile, give them the mannre which is necessary. and you will find that the revenues of your vineyard double; you will find that while before your vineyard nourished only one family, it will now feed two. The salaries will augment, the land will get richer, and you will contribute to increase the wealth of France."

To the proprietors he says: "Buy the canes of the reputed vineyards, of your neighborhood; collect the canes of the finest varieties of vines in your own vi. 6yards, plant them in nurseries, and train up new plants which will enable you to replace vines which have died in your established vineyards or to plant new vineyards all together. Do not provine, but fill up all places which have become vacant by twoyear plants from the nursery. Carry earth and manure to the extent to which the vineyard requires it. Maintain your vines with tranks, and cut them upon a fruitbranch and a wood-branch. Do not spare hand labor, and you will find that your wines will be double in value, and that their quantities will be as great as that produced by the coursest vines,"

To the Government M. Guyot says: Make yourself the instrument of collecting all the canes of the best growths of France immediately after the cutting; plant them in nurseries, and you will have in two years, at a very small expense, millions of vines. If each thousand of these vines be sold at five francs, the reveoue will amply cover your expenses. Create in Algeria, in Landes, in Sologne, in the Champagne, model vineyards and nurseries, from which the deserts which are so close to all these places could be populated; and after teu: years the capital employed will return you 10 per cent; the colonies will be fixed, and the wines of France will be bought by all are punched out, make excellent pipes to the world. If to these immediate means you superadd the importation and study of foreign vines, and carry on their treatment lection was a very useful botanical one, but to the completion of the process of vinification, and you will establish the science of viticulture and emology on a definite lath fence above narrated. and solid basis."

BAMBOO FENCES.

The fences of the United States, writes W. A. Sanders in the Rural Press, are valued at \$1,500,000, a sum greater than the cost of all the buildings in all of the towns and cities. A good fence is a permanent improvement. The question is, which is the cheapest and best fence? Farmers are beginning to learn that to build the ordinary rail or plank fence requires ten fold as much material as is required to build the woven wire picket fence, which is equally serviceable, durable, and far more ornamental than any other practical farm fence; it is not dan. gerous like a barb wire. Many an animal has been injured with the barb wire fence, that with the wire picket fence would have been uninjured. And here I must tell a little story. A friend of mine engaged in harvest, which may be approximately estiftock raising procured a car load of laths and set about fencing his place according to the latest improved methods. As the beautiful lines of fence were extended forty rods or more per day by each machine, run by two men, costing less than half what any other good fence would cost he was, indeed, proud, as well he might tons, against 211,000 tons the same time

His stock left all other kinds of feed and gave their whole time to eating up the laths composing the fence. He looked at them more in astonishment than anger. Finally he got off his horse and thought he too would try the edible qualities of one of his laths. It was of a delicious saltiness. The explanation was simple. The laths were made from logs that were rafted in the salt water of Puget Sound, and had hecome saturated with salt. Whether by giving his stock an extra amount of salt he can save the balance of his fence or not, remains to be seen. Had he used pickets made from arundinaceae canes, he would have escaped losing his fence, and the scarcely less annoyance of having his fence imperfect from knotty or cross-grained laths. I claim that this is the only plant of the bamboo, or of any allied species, that has proven of any value in California. The canes grow in dense forests to the height of thirty feet, with the diameter of from three fourths of an inch to two inches, and are coated with such a hard coating of silex that not even a jack rabbit will attempt to gnaw them. I estimate that an acre will produce enough foot pickets yearly to make six miles of fence. The tence is as easily made as if made of lath, is as light, and very much stronger. The machine we use here to weave it weighs thirty-four pounds, costs \$20 and with it two men can build, right in the field where it is to stand, forty rods of fence per day for a cash outlay of ten cents per rod for the three strands of wire that we use in weaving it. The plant is propagated readily by means of roots or cuttings. The first year's growth from roots will be large enough to make fence pickets, while from cuttings you have to wait till the second year to get a growth sufficiently large. It will grow with a very small fraction of the moisture necessary to the growth of any bamboo or other allied plant. The largest stems, when the septa at the joints convey irrigating water under ground. You must keep the growing plants from hogs and other live stock, as they devour the tender stems and leaves with an avidity scarcely surpassed by the eating of the

THE PHYLLOXERA IN FRANCE

The Economiste Français estimates the loss suffered by French wine-growers through the phylloxera at I0,000,000,000 francs, or double the amount of the war indemnity of 1871. This loss is considered to be the principal cause of the commercial and agricultural crisis through which France has passed in recent years, while it has also reacted nufavorably upon the revenue of the railway companies. The sum total given above is calculated as follows:

Totally destroyed, I,000,000 hectares of vineyards; partly destroyed, 664,511 hectares, the loss on which is equal to the entire destruction of 200,000 hectares. Reckoning the hectare at 6,000 francs, this gives a loss of 7,200,000,000 francs. To this must be added the deficit in the wine mated by the quantity of inferior wine and raisios imported, and which in the thirteen years from 1875 to 1887 amounted to 2,800,000,000 francs.

THE STOCK of sugar in four parts of the United Kingdom on May 1st was 228,000

THE VINE AND ITS TRITI

I desire to present some thoughs, writes Dr. McCarthy in the Vineyardist, in two or three papers on the above named topic, in which the objective point will be to bring out something on the vine, although it may not be new to many of your jutelligent readers. Something relating especially to its history and uses among the nations of old. The subject is an interesting one as a mere study, and certainly is not one that can be compassed in an hour,

Among the vast number of plants which grow out of the soil, ranging from the moss which covers the rock, or the "old iron-bound bucket that hangs in the well,' up to the cedars which crown with per petual verdure the lofty head of old Leb anon, none are more wonderful and none more useful in very many ways than the grapevine.

It was Sidney Smith who coined the expression-"bread is the staff of life," the truthfulness of which the world recognized at once, making a popular maxim of it, and so the saying has passed into common use, and is one which the world will not let die. Our great gram producers of the west realize the force of the saying, as they send to the markets of the world millions upon millions of bushels of wheat, to say nothing of the rye, barley, com, oats, etc. The Chinese and Japanese re gard their rice in the same light, and millious of our Mangolian brothers on the other side of the globe, look upon it as the "staff of life" to them, and so it is. Down vonder in South America, on the high table lands of Chili and Peru, the quinoa is the "staff of life" to multitudes. Quinoa floor is much like our out meal. There is far-away India and Egypt the dhurra is the "staff of life" to other millions. While in still other countries the sago pulm fornishes the brend of the common people and is their "staff."

But of all the fruits known or grown the banana takes the lead. It is an ornament to the garden or lawn, as it sends up its great, green, fleshy stem from which shoot out broad, shining leaves, that bend earthward in graceful curves. But it is more than ornamental for it supplies an article of food, where it is indigenous, that could not be dispensed with. To those people of the tropical latitudes the banana is the "staff of life." From any given area it is said to yield a larger supply of human food than any known vegetable. And it is not an uncommon occurrence for a banana tree (it may be so called, though not really a tree) to yield in one season seventy-five pounds of fruit, while the average is generally from forty to fifty pounds Humboldt is quoted by Prof. Johnson as saying that "the same space of 1,000 square feet which will yield only 462 pounds of putatoes, or 38 pounds of wheat, will produce 1,000 pounds of bauanas, and in a much shorter space of time. The banana constitutes the chief food of millions of our race,"

This paper might go on and speak of the date, the fig. the bread fruit, etc., all of which are used for daily food in some land. But the grape is the object of this "study," which, like those just spoken of, is a most untritious and wholesome article of dict, and one which vast numbers of the human family, in different parts of the earth, have almost fived upon. If we, of this age and laud, only knew it, the grape through its whole season ought become a

with the banana and the bread fruit of the brought forth wild grapes," warmer latitudes.

any vine, for there are many of them, but especially about the 1st of October every therine the vitis vinifera of the botanist. This plant is doubtless as old as the creation of the vegetable kingdom, and hence began its career "in the beginning," when the fiat of the Almighty covered the earth with plant life, each species preserving its own identity to this day, according to the divine order in nature, as expressed in the first chapter of Genesis, where we read And God said, let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after his kind, whose seed is in itself, upon the earth, and it was so. And the earth brought forth grass, and herb yielding seed after his kind, and the tree yielding frmt, whose seed was in itself, after his kind; and. Godsaw it was good,"

The vine is supposed to have first come into use in the days of Noah, back of whom we cannot very well go, for in that oldest of books-the Bible--frequent meution is made conc rning it. Indeed, it is omite noticeable how much one may learn about the viney and from incidental references to vine culture found in the writings of the Jesus.

We are told there, simply as a fact, that "Noah began to be a hisbandman, and the plauted a vineyard; and he drank of the wine and was drunken. Not only was the vitis vinifera grown so long ago, but the juice of the fruit was expressed, and most likely the patriarch Noah was ignorant of the intoxicating properties of fermented grape juice, and house the difficulty into which he was plunged. But let us be charitable, and not condemn him for a six ignorantly committed. He was only once caught in the snare, so far as we know. The grape is spoken of all through Jewish history. Away back in the time of the judges, 1,200 years before Christ, the season of grape gathering is alluded to as a time when the people left their habitations in the towns and villages, and literally dwelt in the vineyards in tents and lodgesand it is feared from the statement made in one place that they indulged in more than merely unfermented wines, for we read: "And they went out into the fields, and gathered their vineyards, and trode the grapes, and made merry, and went into the house of their god, and did eat and drink, and cursed. Abunclech '

They gathered the fruit and expressed the price and drank it freely. But it was not always so, for the sins of the people brought upon them the auger of God, Hence, we read that in the times of national calamity their laughter was turned into mourning, "And gladness is taken in the vineyards there shall be no sing- observant, we clip the following. rug, neither shall there be shouting; the ing to cease

verted into vineyards, thus utilizing waste-

natural state, the season may last through built a tower in the anidst of it, and also immigration that has since become so nearly the entire year. In point of use-1 made a winepress therein, and he looked wearked had not begin in those ten years, fulness as a article of diet, the grape ranks that it should bring forth grapes, and it

But the subject on hand is not a vine, or lakes may be called "very funtful hills,"

To be t outinual.

A MAGNIFICENT WINERY

Senator Stanford is building a magnificent winery on his famous Palo Alto farm, at Mayfield.

He has long seen the necessity of "seasoning" our wines instead of sending them into the market in a raw condition, a custom which has long been prevalent amongst the California wine growers owing to their lack of storage facilities, and it is his intentions when the new winery is completed that no wine shall leave his cellars under three years of age, hence his reason for building the same

The building which is to be of brick will be two and a half stories in height, and is to have two single story L's in the rear. The ground floor, which is to be used as a store-room, will be 169 feet by 12713 feet, and have a concrete bed five inches thick the distances between the floor and calling to be sixteen feet. The second floor, which is to be used as a fermenting room, will be thirteen feet high and have a double floor of one and one buf inch grooved and tongued pine laid crosswise, with two inches of tar paper between, which will give the floor great strength and prevent the leakage of wine to the room underneath. The top floor or attic, which will be utilized as a crushing room, will have a floor of similar constitution, and will be cleven feet high. The building itself will stand forty-eight feet nine inch s in height and have several small gables in front with trict in a wonderful way. They have a large one on either side, whilst a capela will adorn the centre, giving the place a very fine appearances

An engine-house, 30x26 feet, will be built in the rear of the premises, with a concrete floor. The whole is to cost about \$29,000; that is, \$26,000 for the winery and \$3,000 for the engine house

The works are being carried out by Thomas Whitehead, who expects to have them finished by the 12th of July.

It is expected that the winter vintage at Palo Alto will yield something of 60,000 gallons. As each vintage reaches its third year it will be removed and the mereasing vintage substituted under the new system, which will certainly give the new winery a reputation that our other large winegrowers might strive for with advantage to themselves.

POPULATION OF CALIFORNIA.

From the Propers Cause, of Red Bluff, away and joy out of the plentiful field, and whose editor is evidently industrious and

"It is not regarded as an over-sanguing treaders shall tread out no wine in their | estimate that the next census of the Govpresses; I have made their vintage shout- criminal, to be taken in 1800, will show that California has about doubled her Among the Jews the hillsides, were con-population in the ten years, since the last consus was taken. The national consus of places, besides conforming to the nature of 1880, credited this State with a population the vine. It was so as long ago as the of 864,694, and those who have watched days of the prophet, Isanih, who lived the growth of the last few years have conmore than 700 years before Christ. He fidence in asserting that the next census. The usual quantity of from found in wine says: "My well beloved bath a vine- will show a population of at least 1,500,000yard in a very fruitful hill, and he fenced | Between 1870 and 1880 the increase, ac-"statf of life" to us; and as we learn to it and gathered out the stones thereof, and cording to the census figures, was about

master the difficulties of preserving it in a planted at with the choicest vine, and 300,000, but the great tide of westward

Four great overland routes have been finished since the last census was taken. So the hills around. Keuka and Sensca, and with their completion began the great westward trend of population.

> In 1885 a State consus was made by estimate, and this gave California's population to be 1,079,000. The two years since that time have shown the greatest growth and development, in nearly all parts of the State, of any of the seven completed years of the decade. United States Surever General Hammond, from facts and figures secured by him, estimates that on the first of the present month (March) the population was fully 1,350,000 with a floating population in addition of at least 300,000. Taking the census is a little outside of the duties of the Surveyor General, but in making up his report in November and December, last he saw the need of knowing, as nearly as possible, the exact present population, that measures desired of Congress might be urged. All county Great R gisters, for recent elections, were secured and overhauled, county books of statistics were examined earefully, and beside circulars asking for school ceusus, reports were sent to all county superintendents. From these responses and from all other means accessible careful estimates were made. The result was an estimated population December 1st, last, of 1.250,000. These figures were used in latters to Washington. "I estimate the increase since December 1st," said Mr. Hammond, "at 100,000, and that I regard as fair and moderate. People here in San Francisco have no idea of the way parts of the State are filling up. Handreds of settlers are coming to certain localities who never come near the city. They are filling up all that Shasta, Siskiyon and Modoc discome westward by the Canadian Pacific and have been pouring down into those northern countries. People are going in great numbers into all the Sierra foot-hill region. Down South the growth can hardly be imagined. The Government land offices are over run with applicants. Then there are people all over this State now, like fites on a lump of sugar, moving about, waiting to find some place to stay. I wout from Siskiyon to San Diego lately and asked everywhere about this class of people. I am convinced they number at least 300,000, forming a floating population. People East have no conception of the state of things here, and in Congress you cannot convines them of our needs. I tell you this era of California will go into history -the period of the unprecedented westward movement between 1887 and 1890."

WINE AND IRON.

The Journal Pharmaco and Chemistre speaks of wine grown at La Seyne, Department Var, France, which is "probably the only one so far known which contains more than traces of iron maturally. This is, no doubt, due to the positive endation of the ir in in the soil. On an analysis, the wine was found to contain men but r

strative all dated is only un Among the latter 0 11 most ferre ovale.

varies from 0.01 to 0.02 gm. per liter.

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Gountry Board Wanted.

A family in the city desiring to spend a few we ks in the country wish to lind accommodations with some private family on a farm, within easy distance of a line of railroad. Address X. this office stating location, terms, etc.

THE ROUTE along the extension of the Donahue broad-guage road from Cloverdale to Ukiah is likely to be one of the most popular trips open to visitors and citizens of San Francisco. The country tbrough which it passess has no equal in any other portion of the State for beauty and variety of scenery. Skirting along the banks of the Bassian river for miles. with an occasional dash through the primeval forests of the gigantic red woods, the traveler is enabled to feast his eyes on glimpses of mountain scenery and pastoral peace in the bordering valleys, typical of the general topographical appearances of the more distant portions of the State, which can only be reached at a heavy expense of time and money.

The fishing and hunting in the vicinity is still good, the county having been hitherto free from the raids of the Philistine who has so effectually cleared the grounds along the more traveled and heavily settled portions of the route.

The road will probably be in full working in October next, and already the benefit of this improvement is being felt in the strengthening of prices of farming and vineyard lands along the extension. The soil here has always been remarkable for the prolific returns in either grain or fruit, and the difficulty of access and transportation has been the only bar to rapid settlement. Now, however, that this impediment has been removed, booming times may be expected with the development of the vast resources of a district so happily situated for prosperous and pleasant homes.

A NUMBER of wine growers in the northern counties are doing a little trading on their own account, families in this city being supplied with wines by the ten gallon cask at the rate of firty citts per gallon. The cask is shaped to the customer's ristence, where the vipe can be builted off, a reduction being made for return of the cask at the rate of ten cents per gallon, bringing the actual cost of the wine down to forty cents.

THE VITICULTURAL COMMISSIONERS ARE just now considering the advisability of establishing in some convenient place in this city a sample room where wines of especial quality may be placed on exhibition and for sale. Only those of the finest quality which the makers are willing to sell under their own labels will be admitted. The reason ascribed for this proposed new departure is the inability of small makers to reach the public direct under their private labels. Many of the viveyardists in Napa and other of the grape growing counties of the State, have, it is said from time to time, old wines on hand in small quantities which would have to be sacrified if put up at public sale. A few casks of ten-year old port which, might in the one instauce fairly command \$4 a gallon would not bring one-half the amount if disposed of in the open market. In connection with the sample room it is also proposed to have a sideboard, at which rare old wines will be offered to connoiseurs at 25 ceuts per glass. Au objection can be raised to the rate from the weary pocket of the press representative, but as there is a disposition to compromise this vitally important matter on a free drink basis, discussion will be temporarily postponed,

THE TIME to purchase country homes in California is now. The flood tide of immigration is setting in strongly towards the Pacific, and every foot of land will double in value before long. The climate and prednctiveness of the soil is unequaled in any other part of the globe, and as these facts get more generally known the true value of the lands within our borders will be more fully appreciated. A typical California home is advertised for sale in this issue of the MERCHANT. Our of those lovely spots where moun tains, quiet vales and forest glades combine to form an earthly paradise, under skies which seldom cloud. The land itself is capable of the highest cultivation. A portion of it is now laid out in vines, the profit from which alone, furnishes an easy income. A number of never failing springs are on the property, which insures a sufficiency of water the year round for any purpose, useful or ornamental. The dwelling accommodations are excellent, and extensive barns and outhouses are attached to the homestead. About one quarter of the money which would be asked for some worked out acreage in the East would purchase this beautiful property. No severe winters and mouths of unreunitted toil, to wear out life and patience of the husbandman. In their stead peace and prosperity are off-red, not only here, but in hundreds of other similar localities in this sun-kissed land of the vine and olive.

Mallineboot's St. Louis strychnine has become a household word among the farmers and viticulturists of the Pacific States. Its effect on the gopher and ground squirrel is sure and active, the total distruction of whole colonies being only the matter of a very short time. No chance for escape when the vermin come in contact with this powerful annihilator; to touch means instantaneous death. The numerous letters of approval received by the firm at its offices in St. Louis and New York from farmers in California, can be accepted as the best proof of the value and efficacy of the exterminator.

Subscribe for the MEECHANT.

Bonfort's reports from the vineyards abroad are on the whole satisfactory. In Bordenux and Burgandy the wood shows well everywhere, and hopes of a good growth are expressed where the vines have been well carted for. In Germany the pruning is well over, and the wood has been found generally in a very satisfactory condition. On the Moselle the effect of the late frost has made it impossible to tell anything about the new wine yet. The vines are looking well. In Hungary the wood is not so satisfactory, and it is feared that the quality of the 1888's will be found injured by the severity of the weather.

Owing to the suspension of commercial relations between France and Italy, and the imposition of a doty on Italian wines, much distress prevails among the vine growers of South Italy, and it is thought they will be all ruined if the situation is prolonged.

A combined attempt to recuscitate the Cognac vineyards has been set on foot by some of the leading houses in the district.

HIGHER PRICES FOR WINES.

The predicted 60 million gallon crop is not so serious a bug-bear as two or three years ago, remarks the Livermore Herald. Wine makers and dealers, as well as growers, realize the improved situation and concode better prices all along the line, and all over the State. We are creditably informed that the wine makers in Napa Valley are now offering to contract for three years for Zinfandel, Chassalas, Riesling and Burgundies, at \$25 a ton. In Souoma county last week, a cellar of a well-known grower, containing 50,000 gallons of '87 wine, was sold at thirty-five cents. This wine was mostly Zinfaudel, and the remainder from choice grapes. We are informed by J. H. Wheeler, Chief Executive Officer of the State Viticultural Commission, that Arpad Haraszthy, of Sonoma, offers to contract now for Petit, Pinot and Chauche Noir grapes produced Livermore Valley this season at \$25 a ton. Last year these grapes were sold to our local wineries at \$12.50 a tou. Here is an advance of 100 per cent, bid five months before the viatage, We may expect a reasonable good crop of grapes this season, and we are certainly sure of good prices for them.

WINE ON THE CONGO.

At the time of my first arrival in the country a difficulty was anticipated in a certain station (which I will not name), owing to a scarcity of carriers, and the chief thought it better to put every one on short allowance. Among other rations Portuguese wine was issued at the rate of half a bottle per man per day. Each man had to send his "boy" to the store with his bottle every other day, and of course there was a rush for the big bottles. The storekeeper, instructed by the chief, refused everything larger than a champagne bottle, and as the second officer in charge of the station superintended the issuing of the rations in person, there was no chance for any man to get more than his share. This did not please the engineers, who decided, at a council held in the messroom of the Stanley, that half a bottle per day was not enough, and forthwith a collection of empty bottles began to accumulate in the engineer's store, and experiments were instituted to find out whether the capacity of any one of them exceeded that of the rest, but with very unsatisfactory results.

At last some suggested the device of blowing out the bulge in the bottom of the bottle so as to leave it nearly flat. No sooner said than done. Not only was the bottom flattened, but it was found possible by means of heat to slightly stretch the bottle itself, so that, although it appeared very little larger than an ordinary champague bottle, it would hold nearly half as much again. The trick remained undiscovered until the engineers had all finished their term of service, when the ingenious deviser of the same, being the last to depart for Europe, left his bottle to the second in command, with a hont to keep his eyes open for the future,-Blackwood's Magazine

PROFITS OF OLIVE CULTURE.

Ellwood Cooper, the best known of California's olive growers, says the Auburn Republican, get \$2 a quart for his olive oil, and is making money at the rate of nhout \$1,000 an acre per annuol. His orchard is thirteen years old, and is down on the coast where he is compelled to fight the black scale, a pest unknown to the footballs. There is no other crop known which returns such profits as this. An orange orchard does not compare with it; in fact there are many kinds of trees more profitable than the orange. If we should divide Mr. Cooper's profits into halfs and quarters, olive growing would still be a wonderfully lucrative industry. To be sure one must wait seven or eight years for an olive tree to pay, while a peach tree will pay when three years old; but the latter is done for in twelve or fifteen years, and the olive goes on forever. The Sierra footbills afford the hest ground in the world for the olive.

A PAPER BUILT HOUSE.

One of the most interesting objects offered to the public inspection at the Sydney International Exhibition was a dwelling house exclusively made of paper, and furnished throughout with articles manufactured from the same material. Walls, roof, flooring and staircases alike consisted of cartouplere; the carpets and curtains, bedsteads, lamps, sheets and counterpanes, towels, hootjacks, baths, kitchen utensils, etc., were one and all preparations of papermache, as were the very stores used for heating the rooms in which large fires were kept burning daily thoroughoot the duration of the Exhibition.

Several banquets were given in the paper house by its owners to the Commissionirs, members of the press, and foreigners of distinction. All the plates and vessels used at these entertainments were fabricated entirely and solely of paper. Should these paper buildings come in vogne they may be expected to soperinduce some striking changes in the rates of fire insurance, at present calculated upon a basis of bricks and mortar.

Arpad Haraszthy has retired; M. M. Estee has resigned, and the Hon. J. T. Doyle reigns in their stead by the grace of the powers that be in Sacramento. The question now, is how long may it please the new incumbent to assume the cares of office.

Unless notice is given to the contrary, the paper will be continued after the time paid for has expired, and no paper will be discontinued until all the arrearages are paid.

ORIENTAL WINE MAKING,

est issue of the Analyst:

apricots, pears, and other fruits. In some effect Person. If he is an old result of as aday picked who competitive. Use he the form intexaction of the seasons they are so plentiful, too, and so the place, and a commission of graps and turning red. Grad the picked fruit into French is a most a ways manufactured horses and donkeys. On certain wire to seed issent. Persions are, he as a valuable the staple articles of tood for the poor, and was cone in hardly in many ways. You action of the dye as even is possed whole caravans of donkeys and mules, and of making wars in his own hor . . r in sometimes of camels, laden entirely with his own bladf. If myboly comes in, the grapes. They are carrying the grapes Persian purpor is in rely a visitor, an infrom outlying vineyards to the cities for terested onloss r; when the intenter bay s making wine. Certain vineyards, or dische blessoms at one one the knowing tricts, are celebrated for the excllence of [superintendent and export, their wine grapes, and the grapes from | Such a partner Mr N four days' march from Shirax, and are so restill by his farrash one day asking the highly valued for wine making that there privilege of an interview with N is no end of rivalry and intrigue among Sahib a private interview. The interview the Shiraz nobles to obtain them. The took place that afternoon and ended favorfrom 100 to 300 pounds of grapes, two of desirous of becoming a secret partner to the lesser size being a donkey load, and the transaction. He would share half the the larger a camel's.

I arrived in Persia in the middle of the

self to me,

use 2,000 years ago,"

ther about the nors.

The Persians believe that these pars inand that better wine can be made in the old jars than in the new ones. A win- jar a hundred years old is worth several times more than a new one, not because of any value attached to its autiquity in the abstract, but because it is a thoroughly scasoned vessel. Good wine, they say, cannot be made in new jars; the older the jars the better the wine. The Mohammodan injunction against the making and death. ing of intoxicants has had the effect of making sad hypocrites of three-fourths of the upper class Persians. Even the mollahs and seyuds get drunk in secret, but openly they not only do not indulge, but they profess to regard those who do so with abhorrence. When the wine making season arrives there is as much wire-pailing and diploma y employed among the Persians to make wine on the quiet, with-

among the nobacs of Teleran is to get in a ation in their power. Mrs. L. p. said and a terret to and the time of boxing No finer grapes are grown anywhere. This is a very divintagious arrangement, wood than in Persia, saying nothing of peach soft of both parties of young title right kind. The clayes, I I amed, for picking or promotions by

a is fortunatthese particular sineyards are sometimes in finding in the person of Month Agha Hascarried to cities distant several days' jour- sin-or, this more come to Modah Agha ney. The Cholar grapes grow in vineyards. Hassan delth, finding. Hassans of word grapes are packed in panner taskets obly. Modlah Hassin had heard that called lodahs. Fach lodah holds anywher N ---- intended to brew wine, and was expense, and sup rintend the making of the ware. When it was done he would tak grape season, and shortly after reaching half. The next day N--- and Hassan Teheran became an interested spectator of and I roll out to a big vin yard near the the process of making wine there. The lack, in the fact hills of the E.burz mount house in which I spent the winter belonged aims to pack out the necessary quantity of to Mr. N, a member of the Fersian grapes. Hussan sail it was best to buy Telegraph Department. It was a native them on the vines and leave them there built house, with a square courtvar lim the until we were ready for them. We found centre. One of the first things that awak- the vin yard enclosed within substantial ened my currosity was three huge earth- mud wans twenty fort high. A hule stream ware jars standing in a row on one side of of water flowed beneath an opening in the the compound. They were jury that stood, wall at one sid, and out again at the other. They are free stone, the could vempt from a majors we that who at twenty five ents as high as a man's shoulder, and belied The wat I was used for irrigating the vines platterness, and in evil, way made bitter per galaxies bitter and healther than tea out much in the shap of shinder barrels. Instead of being trained upon josts or Each vessel held about thirly-five gallons, trelas work, the vines were training over "What are they for-to-hold rain water: long ridges of dry earth. The soil of the was the natural query that suggested its vineyard was paid up in long in ends or elf to me,
"No," said N-- , "they are wine jars, were plant i in the truches and gr wover regular old Persian wine jars, that were in the ride s. In lattic were made perpendicular on the south side, but stanting on keep th min coold pare, that in east of "But not these same lars 2,000 years." the north. The vines are traced up the the rip ones his process in is also may T. C. I man & Concheld on Thursday, a "No not exactly; but those three jars northern some set to be nefit by the obhave probably had wine fermented in home rays of the sam which or supposed them every season for the last hundred to be better for the grap at the shreet rays. years." He then went on to applyin fur- S version and grapes were in the vineyard, from atthe what grap's called kishmish, from which are made the sultanagh a body that brandy can be, and inprove with age, just as wine itself does, raisins of commerce, to big black grapes died, has ben, made from sandist. It almost the size of egg plums,

PICKLING OLIVES.

gives the following in regard to packing olives, both green and ripe:

Rev. C F Loop, of Pomona, is quite an authority on growing and preparing the olive for table use. Mr. Kimball, of Sun-Drego, told me at the late Riversile fair that the pickled clives there exhibited by the could mush contained but a half pur Mr. Loop were the finest he ever sampled, so ht, according to Lod red iff so the conand Mr. Kimball wished me to get for published gross, a form not made of 20 percent heation Mr. Loop's method of packing, of brujed mait was pilled the section I recently called at Mr Loop's home fermentation was complete and astrolohome no longer, as Mr. Loop has obcorbed thou afterfield of pearts of brandy of they \$1,000 as of more walke to him their a mily by degrees a more tractical as home, but was sorry to bear that Mr per tast of turp sold of the Leep we too il to see visitors. But his ble flower. Hor Zott roude early

The following article on the subject of with some European who wishes to make that the letters of in jury they received a wire a line yield termined by expension wine-making in 18 rsm, appears in the lat- wine for homs 14, and by going halves with from all parts of the world to at 22 to makes. By one restron of all the calluhim is care a supply for their own use, olives almost support their wife kindle 2000 or into so it is a howth of air-dried saw-

> division to half a barrel or to with one test is made by entting into them with a caste, ing the water fully on lace-ping to-main a sheath on ing to the 1-night (time yet wish to be a procession d by the Paristans, the clives. The lenger the time the strong rithe brane. I could be an unoth ing difficite on this point ox jung that to become successful.

Ripe olives are considered by Mr. Loprite chives you must take a knife and cat Then sock in man water antical the for many listed consequence, but they are setember when rip that they easily full to prices, and will not bear transpirint in and making the meision with the knittakes much in retime to prepare them for may said that he can ruse grapes profitconsumption than by the lyear was a Bat at y for \$10 pert n. an eith r mathod at is put on a sarry to ! to consty.

BRANDY TROX SANDIST

then be tury size to mess his wa so his that the discovery was made by G rman chemist raining in the name Zeterond. This regains to a master forms from the same to a military D. Edson Smith in the $Pac_{s}^{(i)}$ - K or h_{i} hydrochoods axid in (0.7) as unbrair sam of less thin two pands to the meh, found to bot the more to the graps sugar. With two and a haif hear of further bases he found the larger to be of the period at the mass After neutralized the next with time until a political campaign. The great scheme ready and witting to give me all the infer bully carried out in a rough so in the

(dist wondyield at least 27.4 quarts of 50

cheap that the people feed them to their; wine, as a log-propertien of the better pules of uniform size. Put it in gall as all with a loss a malestry, thereinfield, remaining for the boly in allienon of the sulof sweet grapes, borses are said to thrive path richive. If knows where the best pland of American one hird in the path richid and with result, very well indeed for a while. For several grapes are to be obtained, all about make enough water to wide our the layer. Stills list go with digreen sheaking months in the year they also form one of | mg the wine by the 5bl P rsian process, them up frequently, so is to make the property product by pouring with roun and which hank is so much admire. Every antinum one meets on the reads, on your port shill han from the search a After they have been in the Lye twinty paylore, which mother favorite higher, is four hours, begin to test them to so in order to it with hydrocchloride of sulthe lyc has percurated to the parcellar against each in order to give it a pungent "Kirsh" as extracted from the knife and watching the change of coordinates of the charge land, and contains the flesh of the case, care of by the action as much as twinty two configrants prussic of the type. When this draine of each robuse and per atree it should five or six centireached the pit, wash then a september 12 panes. It is is manufactured always with by in several waters to child about the distinct alleged and it of the best root, to which of the eye, but to do this to your have the solid in the rand formic well. The "bou-stand in water three ericlic weeks, that the casts of country are manufactured by as his are manufactured by of suphame and on eister oil. cool place all the time. Where all lye and The off results as employed are extracted bitter taste is out plat the only stands brine. The only gwood, the older, sorrel, tuch sine varying the strength of the bains according and soil. Such is the trash which is duly

the World's Winery

At the institue of the American National much judgment and practice is necessary) Hern literal Society, held recently in San Los, an intristing paper in right to grape-greating and wine production was to be the charp stand most matrix of sare reality Post Hussman of Napa. He assertticles of food known to man. To picke | d that the wine product of France dwindled in in a surplus of 2 0 s0,000 gallons to hardly thro inciseds in the cares clear to the bound for home consumption; that grapes can be profitably raised in California for bit, er is extracted, and then put them an product \$15 to \$20 per ton, that there is need of bring to soil the taste, or the bright of land stories within win scan b come aged time they are to be kept. Repositives are performed ingoing one of other California can much preferally to set than group on a limits wine to suit the laboring man or the or coffee, and much shoper. If properly protet d California wat, h. believes, become the winers of the world. In the discussion which followed, Combe of Califor-

> At a meting of the criditors of Wm. statement rendered showed assets estimatpolist \$4,505, 00,27, the habilities amountme to \$2.00,000 H. This bayes a surplus I alans in favor of the firm of \$676.

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A 41 Monte Av. to A 411 Monte Av. $4 - \lambda / 12 (1 - \sin k / 8 t)_{1} = 401 / Hayes/St_{1}$

Section in

OUR NATIVE WINE SHIPMENTS BY SEA.

PER P. M. S. S. CO'S STEAMER SAN BLAS, MAY 15, 1888

TO NEW YORK.

MARKS,	SHIFTERS	PACKAGES AND CONTENTS	GALLONS	VALLE
fred Py	Lenomean I Bros	5 barrels Wine	3.779	\$1.13
8		15 barrels Wine	7.58	27
& Co		lu barrels Wine	509	17
W	4.4	5 barrels and I keg Wine	264	179
Bros	14	25 barrels Wine	1.069	7.7
R	44	15 puncheons Wine	9.73911	
4.5	44	Sharrels Wine		1.45
W	" Co	2 half-barrels Wine.	53	3
& S	4.	30 barrels Wine		82
S	C Shill no &	4 barrels Wine	191	16
s & Co		50 barrels Wine	2,485	1.12
D & Co		25 barrels Wine.	1.212	(5.3
V ('o	D Diegrand Co	25 barrels Wine.	1.209	GO
D F	Nana Valley Wine Co.	1 barrel Wine	. 0	
& F	Koh ee b Frohlin	6 puncheons Wine	940	4.3
41	THE PARTY OF THE P	50 barrels Wine	2.535	1.11
B C	C. Corne le Co	15 barrel- Wine	741	3.
D M	c carpy a co	1 barrel Wine	50	
M	14	25 barrels Wine	1.227	49
n d:amond	+ 6	25 barrels Wine	1,223	73
in diamond	1 Cundlach & Co	S puncheons Wine)	1,220	
in diamond	J Gundia ii & Co	2 34-casks Wine		
44	**	1 Barrels Wine	1.690	80
44	**	2 tarrels Brandy	91	21
·		25 barre's Wine.	1.294	Ŝt
B in diamond	taciman a baron	40 barrels Wine.	2.046	71
V in diamond		20 barrels Win	1, 29	34
n diamond		15 barrels Wine	776	27
n diamond	**	25 barrels Wine.	1,291	30
F	**	10 barrels Wine	514	17
B		35 barrels Wine	1,806	55
0	**	15 barrels Wine.	7778	2.
8	**	25 barrels Wine	1,290	36
	Williams Dimond & Co.	1 barrel Wine	47	- 5
P W S		99 barrels Wine	4.950	2.71
		OU DANGER WINC	4,209	2,11
Total amount of Wine			10 665	\$17.58
Total amount of Brandy			91	314,00

TO CENTRAL AMERICA.

E F & Co, Corinto E Dr.	esfus & Co .	6 barrels Wine	3071	8250
A L, Corinto	4.4	10 cases Wine		50
G B, La Libertad	4.6	6 cases Wine	- 1	30
**	5.4	9 barrels Wine	1	
**	41	3 kegs Wine	3586	385
F M. Puntas Arenas	4.6	13 kers Wine	130	135
11	44	1 keg Brandy	10	40
J & J. Puntas Arenas	64	18 kegs Wine	180	170
44	4.6	3 kegs Brandy	30	110
44	**	4 cases Wine	1	20
V A, Champerico Speri	7 & Co		100	55
F A, Corinto J Gu			1.4	7
	4.4	I keg Brandy	15	30
65		3 cases Brandy		21
44	4.4	1 case Whiskey		9
14	8.6	1 half barrel Wine	28	15
41	4.4	S cases Wine		32
4.4	44	1 case Wine		5
J L. Gnatemala	6.4	2 half barrels Wine	55	29
	4.4	9 cases Wine		36
F P & Co, La Libertad Cabre	era. Roma &		60	50
C P, Champerico	1.	10 kegs Wine	100	107
E.C. Corinto Eng.	le Sabla & Co	D 10 cases Whiskey		76
44	4.9	4 kegs Wine	40	123
P N. Amapala John	T Wright	10 kegs Wme	100	87
41	,,	1 case Brandy		9
LL, La Union	6.6	S barrels Wine	400	280
J J R, Guatemala	14	8 cases Wine.		25
P N. Amapala	4.4	2 Kezs Whishey	20	60
Total amount of Wine, 46 cas	ses and		1,900	81,935
			55	210
Total amount of Brandy, 4 ca	ses and		20	145

TO MEXICO.

D & Co, Acapulco Urruela & Urioste 2 casks Wine	120	\$ 3
H Co, Acapulco		, ,
M, Acapulco		
R. San Benito Cabrera, Roma & Co. 4 barrels Wine	80	-
P. Manzanille J H Dieckman 3 ke.s Wine	85	
T. San Blas W Loaiza 4 casks Wine.	236	1
M R, San Blas. J Gunulach & Co. S kegs Wine.	126	
-		
Total amount of Wine, 30 cases and	650	843

TO GERMANY.

W S A Nettu 2 barrels Wine M Z Cal Transfer Co. 1 haff-puncheon Wine	103 50	\$77 25
Total amount of Wine, 30 cases and	153	\$102

MISCELLANEOUS SHIPMENTS.

DESTINATION.	VESSEL	RFG.	GALLONS,	VALUE.
oan	Belgic	Steamer	294	\$13 67
	Ganlvise			67
ntral America	., Sau Juan	Steamer	66	ϵ
tona	Umatilla	Steamer	256	
Total			2,953	\$5
Total Miscellaneous	anama steamershipments	43, 2,		\$20,008 555
Cound totals		46.3	91	\$20,5600

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Zinfandel, Claret, Burgondy and Port.



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Riesling, Gutedel, Sauternes, Sherry and Madeira, also for distilled liquors; Whiskey, Gin, etc., etc.,



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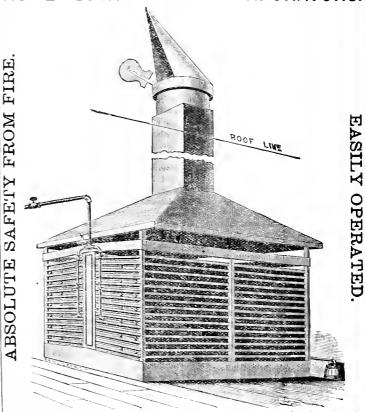
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X L, illar Rock Pkg Co., 2eo. T. Meyers, cean Canning Co. sadolett & Co., Flats,

Washington Pkg Co's "Favorite" Brand, 'Epicure'' brand. Pacific Union Pkg Co.,
Cutting Pkg Co's "Cocktail" Flats,
A. Lusk & Co's pack,
"Mermaid" brand,

"Carquinez"
Point Adams,
Wadham's Fr

Scandinavian Pkg Co., West Coast Pkg Co., Warren & Co., "Carquinez" brand, Wadham's Fraser River,

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ur lines of Canned Fruits and Canned Salmon are incomparable, and we will make prices F.O.B. or U.I.F. for Great Britain, Australia and the Colonies.

PECUNIARY ADVANIAGES OF OLIVE kept lose, plowed and cultivated once or CLASSES.

Much has been said concerning the peenniary advantages of olive culture, ob- lice, and of which Mr. McClellan is an adserves the Santa Rosa Democrat, but owing to its comparative recent introduction into this country, few facts and figures have been adduced in correlearation. the reof. As compared with the immeuse to the exclusion of dampness and delegrowth of the tree and the enormous age which it attains in its native cline, the few trees in this country may be said to be in their infancy, although many orchards are spoken of as being in full bearing. Consequently any figures showing the revenus to be derived from an acre of land caltivated to the olive must of necessity, beincomplete. Such figures as are given b low may be relied upon as being correct, and in their incompleteness form a basis, indefinite to be sure, upon which it will be interesting to calculate the enormous yield to be derived from an olive orchard, the trees of which are the size of a full grown apple or cherry tree, and from thirty to fifty years old.

Among the few olive orchards in this State which are said to be in bearing is that of E. S. McClellan, situated just west of the laguna, on the Sebastopol ridge, His orehard is small, containing but sixty trees, ranging from ten to eleven years old, but its age entitles it to rank among the so-called full-hearing orchards of the State. In good years these trees yield at the rate of fifteen gallons of berries to the tree. Owing to the hot, scorebing wind of last June, the crop was small, averaging but little over three gallons to the tree. The olives when picked are worth a \$1,25 a gallon in the home market, at which price Mr. McCl. ilan found ready sale for his crop this year. At this price his sixty acres yielded \$225, and if the season had been more propitious for their growth would have yield d 900 gallons instead of 180, which would be equal at the price mentioned above to \$1,125. But even the last collection of numerals cannot be taken as an adequate estimate of the revenue to be derived from an acre of ground containing twelve-year-old trees, as the trees in Mr. McClellan's orchard are planted much further apart than is necessary. When properly set out there should be 108 trees to the acre.

Figuriug on the basis of 108 trees to the acre, the income per acre would be, averaging the yield per tree to fifteen gallons, which is a fair estimate and not the minimum, \$2,025. After deducting the cost of cultivating, which is much less than that of many varieties of fruit, and cost of pickling, bottling and preparing for market, the yield per acre would still be nearly \$2,000. A glimpse into the future of a thrifty olive orehard would cause the eyes of a gold worshiper to sparkle. The owner of a flourishing olive orchard should consider himself the financial compeer of a bank president or stockholder in a bloated monopoly. As stated the cultivation of the tree is attended with as little difficulty as the cultivating of the hardier varieties of some of our domestic fruits. Being an evergreen it is a constant grower, and unlike the decidious fruits does have its dominant periods, and in consequence the vital properties of the soil have to be renewed by fertilizing. Mr. McClellan uses coarse maoure once in every two years. digging a trench four feet in diameter about the base of the tree. Too rich manure is likely to prove injurious to the growth of the tree. The soil should be cisco MERCHANT.

twice during the season. There are various methods of pruning, but that most in pracvocate, is to trim the tree in an umbrella shape as much as possible. This tends to admit the tree passag of air among the branches, and of the simbight to its center, terrous moisture. Mr. McCl: llan is an advocate of the Mission olive. He thinks it is superior in every way to the Pichaline. It is larger and has a smaller stone. The nurserymen he thinks advocate the cultivation of the Pichaline in preference to the Mission because it is much easier to propa-

Little experi nce has been had with the larger varieties, such as the Spanish Queen olive, etc. Although inferior in point of size, the Mission is as pleasaut to the taste as any olive grown, and its substance is proportionately greater than that of the larger olives, and is a free stone. The Queen olive is a cling stone. The fruit buds bloom in May, and the fruit is ripe for pickling in D cember and January. If intended for pickling they are gathered just before their yellowish-green color deepens into the purple of their full maturity. When used for oil they are allowed to become perfectly ripe. The process of pickling is simple and attended with slight labor and no-difficulty. When pickled under the Kimball process they are first put into a solution of two ounces of concentrated lye to one gallon of water, and allowed to remain therein for thirty-six hours, or until the bitter taste is taken out of them. They are next put into pure water and allowed to remain until all traces of the lye have disappeared. They are then put into a weak brine, followed by a stronger one, in which they are subsequently bottled. The olives are generally hottled in pint bottles or jars, which cost already labelled but eight cents. The olives bottled sell for \$3 a dozen, \$6 a ease. Without consulting any other limit than that prescribed by the term possibility, it would not be fictitious to test the elasticity of the imagination by penetrating the mist which prevents one reading in the book of futurity and turning to a page fifty years hence, when the young olive orchards of California will be in their prime. At such a time the industry will have grown to take its place among the most extensive of the age. The yield per acre of olive orchards will be enumerated by thousands of dollars instead of hundreds, and their strong branches will remain to puncture the surface of the next flood, and extend to the omened dave the proverbial olive branch.

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Two hundred acres in Sonoms County, ten minutes drive from railroad station. Forty acres planted in the finest variety of vines. The balance rich river bottom, and rolling land capable of the highest cultivation. Several never failing springs and plenty of oak and redwood timber on the property. Good house, large bara, and out buildings. Seenery, climate and roads unexcelled. Good fishing and hunting in the neighborhood all the year round. One of the most elegant and profitable suburban homes in Northern California,

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OLIVES.

grow anywhere and serve for almost any

purpose. On a dry and stony elevation

that would starve out a thistle, the plant

Inxuriates; and if the sea breezes may but fan the young shoots, so much more of promise is there for the olive harvest. Propagated chiefly by cuttings, the willowy looking twigs take root with a proud detiance of ordinary rules; and there is a whimsically planted grove of olive trees of unusual size and beauty near the town of Messa, in Morocco, which illustrates this trait in a remarkable way. One of the kings of the dynasty of Saddia, being on a military expedition, encamped here with his army. The pegs with which the calvary picketed their horses were cut from olives in the neighborhood; and some sudden cause of alarm leading to the abandon. ment of the position, the pegs were left in the ground, and, making the best of the situation, developed into the handsomest group of olives in the district. Olives are mentioned in the earliest records of Egypt, and their introduction into Greece took place at least as early as 1,500 years before our era. Thence their cultivation naturally passed into Italy, the Romans especially prizing them; while Virgil mentions three distinct varieties, each of which has it3 own fastidious supporters in the ancient conflict of tastes. Priny also tells us that they also grew in the heart of Spain and France though he awards the palm to the smaller olive of Syria, the olive of which was at least more delicate than that produced in the western countries. So far as regards the oil of Spain, and to some extent that of Italy, this judgment stands good to the present hour; for the reasons that the Spanish olive is a large and coarser fruit, while the Italian growers are too apt to detract from the limpid delicacy of the virgio oil by the sacrifice of quality to quantity. For the olive, like all generous givers, demands that you should "squeese" him gently. The oil is expressed from the entire pulp and body of the fruit, and its hody stands in inverse proportions to the quantity produced. The first pressure yields a thin, pure liquid, almost coloriess; and with this even the most fastidions of Euglish palates rarely make acquaintance, As the pressure is increased a less delicate product is the result; while if it is still further prolonged a rank and unwholesome residum is obtained, wholly unfit for edible urposes. It should be mentioned that virgil oil does not maintain its freshuess for more than a few weeks without the addition of a little salt or sugar, and it is almost impossible for any one to realize the exquisite delicacy of this first expression of the freshly gathered olive, unless he has sojourned in such a district as that which, say, Avignon is the center. The oil of Aramont, in Provence, was formerly supposed to have no equal in Europe. Both the olive and the manufactured oil of the southeast of France are, indeed, still unrivalled by those of any other country. The Italians pay more respect to the commercial aspect of their production, and among them the the number of olive farmers and merchants is very large. They have a proverb, "If you wish to leave a competency to your grandchildren, plant an olive." Doubtless the advice is sound enough, for the trees often flourish for more than a century, and bear heavy crops to the last. But to peasant of South France the olive is almost what the pig is to the English laborer.

Predent housewives there are as adverse to imported at a much higher cost.

the introduction of a new fruit at table as Within certain latitudes the olives will their thirteen English sisters are to the "new" loaf. In fact, they habitually preserve the darker berries for everyday use: for these not being so agreeable to the taste, "go" furth r-a necessary consideration when they oftener form the staple than the accompaniment of the meal.

Olives intended for eating are gathered while still green, usually in the month of September. They are soaked for some hours in the strongest possible "lye" to get rid of their bitterness, and are afterwards allowed to stand for a fortuight in frequently changed fresh water, in order to be perfectly purified of the lye. It only then remains to preserve them in common salt and water, when they are ready for for export. Among the Romans the olive held the privileged position of being equally respected as a dainty accessory and an ordin ary food. It was eaten at the table of the temperate and luxurious alike; and, whil dividing the highly flavored dishes of thei xtravagant suppers, formed a constituen of Horace's pastoral meal-"Of olive, en dive, simple tastes, and mellow."- Ex change.

CONSUMPTION OF RAISINS.

The United States is the largest cou suming country of raisins in the world and reliable authorities estimate the cor sumption at about 2,000,000 hoxes of abou twenty-two pounds each, which at an aver age of \$2 per box, shows an expenditur of \$4,000,000 per annum for one article i the dried fruit line. The amount referre to represents, say, 1,000,000 hoxes Va encia, 750,000 boxes California, 200,00 boxes Malaga and 100,000 boxes Smyrns The crop of the world for the pesent set son is estimated in round numbers a 6,500,000 boxes, about as follows: Va encia 3,000,000 boxes, Malaga 6,000,00 hoxes, California 75,000,000 boxes au Smyrna 200,000,000. The shipment Valencia raisius to the United States t date are 500,000 boxes, 300,000 of which are now affoat.

The consumption of raisins in the United States during November and D cember is greater than any other for months in the year, which is due to the holiday season which prevails--Thank giving coming late in November, follower by Christmas and New Years a mon or more later on. California raising which are now so popular with the co suming public, have made rapid progre during the last four years, from which date their prominence dates. Each ye the product has been vastly improved, as it is believed that the course will contin until their quality equals that of the fo eign product.

It will be remembered that the packet of Malaga last year adopted the twent pound box as the standard, heing force into it by the packers of California. has just been announced that they ha adopted the old standard of weight twenty-two pounds to the hox, on account of the fact that the greater proportion the pack there is consumed in Great Br ain and upon the continent, and deale in those countries are strongly opposed the new system. The importers are no dwelling at some length upon the fact th they are offering larger boxes at very lit difference in price, while California ages claim superior quality, and put their three crown loose goods against the two-crown

HOW TO PLANT FILLES.

It is always better, says the Garden de Porest, to plant small trees than large n s. They are more easily and cheaply poved, recov r spon r and grow more apidly. A transplanted tree two or three get high will soon overticle and surpass a men litger on , and grew into a merigorous and beautiful specialin. A vast mount of more y and care it it all of time wested every year in trying to transplant arge trees. It is not essential in digging patries to proserve a large ball of earth very heavy mass of a rth often breaks ie tend r roots, and is, this for , a danerrith r thin an alvantag to the tree. t is essintial, however, to preserve as mny of the small f ding roots as possile, and care must be taken in digging a ee not to nunceessarily break or multilte them. All broken roots should be nrefully cut away with a sharp knife beno the tree is replanted.

Care must be taken not to expose the bots to the dying influence of the sun nd wind. They should be covered as oon as the tree is dug, with a piece of both or matting, or they may be dipped pated. The secret of successful trans lanting is to have the soil brought into is better, therefore, to plant in dry and ot in wet, rainy weather. The enting of ad not only protects the roots from dryig, but helps the earth thrown about tem to adhere more closely. Two men re required to plant a tree.

The hole should be twice the wilth of ie mass of roots, and the bottom should worked fine with a spide. One man sould then hold the tree erect, with its ots carefully spread out in all directions the hole, while the second man should renk the soil taken from the hole, so as make it as fine as possible, and then let Prohibition notwiths anding. fall from the sp.ol down upon the roots. hile the first man should lift the tree ently up and down, that the fine earth ay penetrate and fill all civities about . all trees should be ear-fully and securely oats essence."

aked as soon as planted. The operation. The proprietor of the Druggists' Circu-- - -

CIDER AND WINE

P. Pointdouff in the latest issue of Line rt's, says. It is not frequently considered le of wine into coasumption in countries an excellent substitute for wine, and it two or three drops have be n known to be largely consumed in France, in other a death dose to an infant, and in the fact | 519 MARKET STREET,

d-partments than the northwest, filling, in fact, part of the gap be "beneficed to infant and et generan, between the production and consumption says Dr. Abbott, the wicks best of the of wine, since the destruction of part of business may be seen without explanation France's vineyards has constrained according to alcohol Dr. Davenport remainfull of moree to Import annually a quanti-of some" to contain from 30 per at wines that exceeds two hundred matrons waips to 45 per cent, the greater of collons

1887 in France will show the case in roughly say to the State Bond of Holds, in a numb is

Wim from the fr shigh spes, ast home our callons

With from pointage, 70 5 m/ or goal is Wine from raisins, 08,500 000 g d'ons. Cider, 354,000,000 gallons.

And if the amount of cabr, as in some years is the case, were a full 500 000 00 gallons, there would be hardly a surplus.

Beer, although its consumption is inen using constantly, does not seem to become a family table drink in France.

The government of that republic , viends its fostering care over the viticulture in the most handable manner. The reconstrues of several years' experience having hald 3 tion of her vineyards goes on triamphantly, and judging from actual increase each year, the period is not far distint when the grovers of France will need no wines) wet mad until they become thoroughly from oth resorties. Algors had in 1886 a crop of 41 199,652 gittlens, and in 1887 of 59,255.7 m gailback of wine. Such proose and imm drate contact with the roots. Igness after just fourton years of practical vinculture in that eccony borng, in fact, of Steel," of an ulmost persued the co double the amount or bill ved. United fosters grand hopes.

> The munister of agriculture has organized an exhibation of cid rs, and that by excites own estimation and in reality; he feels new interest in that importation branch of production in Prance.

> Stimulating cider production in this country would be equally beneficial. Resident he is in a certain sensor spotsal tional cider consumption, however, like the us of some for the table, mods equalsumpletion, the antihygicale doctrin's of

_ . _ AN ESSENCE OF DEATH

The Massachusetts Board of Halth, as he roots. When the hole is nearly filled as learned from Dr. Samu I W. Abbett, the this way the earth should be pressed health efficer, is keeping up the work bewn with the foot, beginning at the out-gun by it cleven years ago, in examining de of the hole and working in toward into proprietary medicines, and just now e stem of the tree. The hole may then lit is particularly looking into what is adfilled and the soil ramined down solid vertised by "Dr. Buck'and" as "Scotch

then finished. It is not uncommon to jet recently caused analyses to be made of a water poured into the hole white it is the compound known as "Scotch outs ing filled up. This practice does harm assomee" in order to assortain its contents. ther than good, as it washes the fine Dr. Bennett F. Davenport, chemist for il away from close contact with the Board of Health of this State, and of the they will grow intent, for 1 bel, ye the chemical societies of America, Londo. Paris and Ferlin, the British Scienty of Public Auglysts and the German Society of Analytical Chemists, wrote to the Drog gists' Circular:

"I have analyzed a walled bottle of hat a proportion of ender enters by the Scotch oats essence, double strength, and find that each fluid onnce contains onhere formented fruit juice is the habitual quarter of a grain of sulphute of morphine. companient at the family meal. Nature Since this report was given, Dr. Daveny, the regions debarred from the culture | port has continued his my stigations with | the grape vine, but where the apple this result. The "essence" is sold in chard is or importance, are not only the three grades of strength. No. 1 contains oducers, but also the chief consumers of little or no morphine at all, No. 2 considerder. The recognized value of the tar- able, and in No. 3 there are from 200 toic acid of the grape over the malic acid 250 of landanum, or about two teaspeedthe apple is the reason why wine is fuls of launanum to every wine- lass. This preferred by the many who can afford is enough to kill an abit not additional series greater expense. Nevertheless, eider the use of optim says by Albert, and

and appeal oring that this medicine is freely advirtised to - Indtles.

The following figures of the product of . Two years ago Dr. Albert L. ! this to the bearing for the sport holds.

"The purchaser of such pripars thus becomes the victim of a small train under the supposition that he is little ing a remody or antiblete, the lattick wild I he receives being simply the coemy red. guiso against which he is beading his engos to obtain relief. This showeful year tion des ryes nothing but the savers demnation. To the credit of Massa vias its but few, if any, of thes prepotations to made within its limits. The r suits the opinin habit are known to ad physiclaus in active practive, scare by any orto recognize this evil, to a greater or 1 -digite, in his daily round forcet.

SHARING THE PROFITS

This is a subject which as a courning sub-rable attention, and one on which had erius to be diversity of opinion. A S₁ ster filld (O manufacturer says in the "Ag the last way to seeme the undivides a States are at present capable of producing trest of an employee is to share with him the profits of the concern. You thus hold him your partner; he is elevated in La certain paids in the work turned out, a) only of his department, but of the cutatictory, he has aroused in him a folia for anything that may go wrong it at the stablishment, and he will use his best in utal and physical end avais to do the patientar piece of work he is doing as well as it can possibly be done. I belies also, that the system of prafit sharing is solution of the labor question. The system brings empt yer and employee tog ther. They are triends, co-laborers, in a common cause. What is for the best intenst for one, is for the best interest of the other and should any diff rence arise between them, they will not go into a corner and sulk and nurse thair grievances until mode hill becomes a mountain hat will come together like partners, as they are and wit adjust their differences with sol trouble. I am not saying that eith to he players or employees in this country invet ready for this new order of things. But time will come when the system will be very generally adopted in this country

THRIGATION IN INDIA

of Sc. 1 1 m there are year to escal transitionals in Note and your the world is so well I by all, can to and physical product of the best results from irb lig sede as li lic very a set in had ival sales por the primary from the Any seed to be a suitant chains, care to campa repetible 11 - 3 111 - W(1) research to the Appendix of the sounty of a list of a high is if it had at he may be t with nexistly re-Our same to trace the measures $C_{\rm d}$ that and a division in ordinnot with a saismod drought one thank that swept away millions of

The claids have put quit a new face on h matter. The magne transformation aght about by the distribution of water Similar where the annual runfill is but and, so a more bugatette to what the asteries there pairs is something any years. A. m. A. year made atom of the and system on a researching of green i. i. rum but by by and which is the the land will plan on which there is adovin a blade of griss. Just as fir as in wat r from the ditch extends there the sed revels in a waith of intense green, yeahing crop after crop almost as fast as they can be sown and rapped. But the line b two is that which is irright d and that which is not is as sharply defined as hough it were an affair of paint and can-. . - F.c

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Sign of the sign of the sign and the sign of the sign

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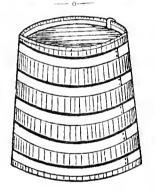
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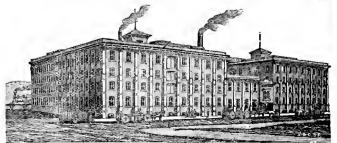
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ADULTERATED DIGINKS,

French wine merchants who complain of the manufacturers of Hamburg closmpagne and other Garman imitations of the juice of the grape sold under the name of noted French vintages, have evidently little to learn in the art of adulteration. Two of these gentlemen, named Lind n and Margot, have just been tried for selling spurions wines, through commercial brokers, in public sales at Macon, St. Julien, St Emilion, etc. A public analysist gave evid nce that the wines were not wines at all they were a composition made with an infusion of dri d raisins, colored with extracof ceal tar. The defendants pleaded that they had sold the wines as they received them, and that the persons who had consigned it to them were well known. They also called as witnesses a number of winshop keepers, who declared that as win a go the defendants' wine was not worse than my other, on which the judge remarked that it was not saying much for the articles they sold. Some purchisers of the wine said that they believed in it because it was sold by a licensed broker. One of them consoled himself with the reflection that it nattered little as "People nowadays drank such muck!" And another said that the wine had an agreeable flavor of strawb r. ries, but as it gave his children the gripes ifter they had drank it, he poured it in the entter. In spite of witnesses as to charicter, who spoke highly of the commercial utegrity and honesty of the defendants Jinden was condemnated to eight months mprisonment and 1,000 francs fire and dargot to one mouth and 100 francs. The tefendents were ordered jointly to bear the ost of posting twenty-five printed comes of

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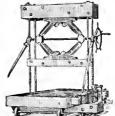
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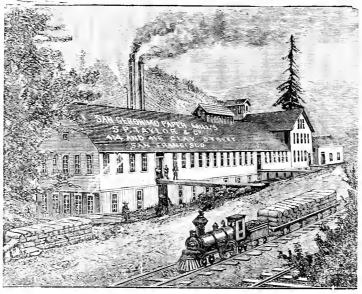
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Chura of all the countries makes the poor stish owing though (v) in that Celestia Eurproches shown a sow-2 ing more asc.

British Columbia began awakening in 1880 and gradually in reased her imports of air win so until in 1880 her demands with literath usual galans and in 1887 a ach literate in the usual

It is not trained in the many of the first part of mark the done very processing and its last harmonic transfer of research to a to Now as the Spasmedic offers have been made from time to time to place our wires in Far problem in the total sets you as trying, without bring of twenty six thousand gallons and sixteen hould associate wine is somewhat to account and it is my board that if our was some increased in proceeding without the research processing when it is not increased in proceeding without to great an arrows a principle of the market set in the research to the last sewith a very low years. It is not the great Hourst has set in the first the Braket State was also with a continuity for the series of the warm of the market set in the first to the remark of the market set in the first to the research of the series of the seri

showed an unreasonable advance and decline from 1875 to 1885, when they took about three thousand gidlous, suddenly took eighteen thousand in 1886, and further increased their demand to twenty-six thousand cases in 1887. This must be attributed entirely to the building of the Panama Canal, and it should be exceedingly gratifying to us to see our wines thus meet those of France on neutral ground and hold their own in quality as well as in price.

In the matter of totals from 1875 to 1/87inclusive. Central America bears the palm, and gives us the most satisfactory results both in gallons of wine, numbers of cased wine, and in dollars and cents. Mexico follows next; Europe follows in gallons of wine, but falls considerably behind the Sandwich Islands in monetary value. In fact the rank belongs to the Sandwich Islands, for the excess in gallons in favor of Europe was a chance won through the Stella episode, while the demand for Hawaii was a constant and legitimate demand, Then in rank follow Panama and South America, British Columbia ranks Japan slightly in value, but exceeds in gallons and numbers of cased wines. Thus showing a better quality of wine shipped to our English Colonial neighbor.

Glancing at the table showing the yearly total exports to foreign countries, we must confess a gradual favorable increase, with three exceptions, from 1875 down to present date, in gallons as well as in dollars and cents and numbers of cases. If we consider all the efforts made, the result might be considered trifling, but we must not lose sight of the fact that our greatest exports were made within the last two years, the latter one notably greater than its predecessor, thus showing a foothold gained, an advance made. In looking over the above tables. I look with the greatest interest upon the numbers of cases of wine exported to the various countries, and deem that country the most valuable to us that requires the greatest amount of cased wine. In the trade, cas. d wines are always considered of better quality, more mature, and consequently commanding a better price than wines shipped in bulk. Besides that, being labelled and packed by local firms with their own labels and brands, they earry with them the reputation of our State and herald whatever quality they may possess to any country and every clime which they may reach. Thus our good wines can proclaim themselves throughout the world, and increase both good name and trade. More than this, the handling and bottling of our wines is not always successful with those minecustomed to their peculiarities, and thus our wines are often spoiled through ignorant management, and our representation thereby made to suffer. Furthermore, by caseing and labelling our wines with our own labels, they cannot be conveniently palmed off as foreign wines upon the confiding consumer. And lastly, the bottling, caseing, and handling gives work to so many more of our working men in wineries, box manufacturies, mul factories, paper mills, glass works, printing, and numerous other local industries, all of which develop the resources of our State, and increase its prosperity.

While the above tables show the comparative sea exports of our wines to each country, for each year, the tables here following will show the drift and such fluctuations as have occurred from year to year in

Panama and South America, which thirteen years. This arrangement shows at a glance the yearly progress of the trade with the different countries, and must prove of some interest to the vine grower, as well as to the merchants and transportation companies, and it is for that reason I have compiled them, and endeavored to rescue them from total oblivion.

California Wine Exports by Sea to New York and Foreign Countries from San Francisco, from 1875 to 1887 Inclusive.

_		
TO NE	W YORK,	
		Va'ue
1875464.706	74	8283,766
1876 493,459	74 811 729	8283,766 299,318 480,141
1 (ars. 6a (obs.) 1875 461,766 493,455 1876 493,455 1877 844,301 1878 1879 1359 470 1884 1,450,514 1882 1,110,539 1884 1,110,539 1884 1,110,539 1885 1,102,081	861	480,141 612,301 723,186 725,373 777,946 780,394 688,5-1 626,132 542,643 289,792 696,442
1879 1,359 470	226 818 172 571 363	723,156
1881 1350 514	318 179	777 946
1882 1,108,316	571	780,394
18831,211,755	363 200	635,5 1
18851,102,081 1886610,366 18871,680,227	150	542,643
1886 . 610,366	150 180 1,835	280,702
1887 1,680,227	1.530	696,412
Total 14 351,975	6,056	\$7,505,975
TO CENTE	IAL AMERICA.	
Years. Gallons,	Cases	Value.
Yerrs. Gallons, 1875 130 1876 173 1876 173 1877 12250 1877 12250 1878 5,911 1879 5,740 1884 11,05 1883 9,633 1884 9,139 1885 16,101 1886 19,099 1887 31,760		< 279
1877 12,250	1,149 2,028 2,297 2,514 5,290	102 14.1 5 13 264
1878 5,911	2.025	18 264
1839 5,740	2 511	8,991 17,871 28,704 18,645
188114,165	2,329 1,321 1,629	23,704
1882 10,015	1,321	18 645) 18 081
1881 9,139	1,629 1,115 2,194 2,699 2,531	11,298
1885 16,101	2.194	21,700
1886 19,009	2,581	14,298 21,700 24,625 31,654
	-,	
Total 148,209	22,312	8205,322
TO BRITE	SD COLUMBIA,	1
To BRITE Vears Gallons, 1875 105 876 986 1877 206 1878 1080 1878 1080 1878 1 1579 111 1880 1,338 1882 1,770 1883 3,629 1883 3,629 1884 1885 5,975 1885 10,249 1886 10,249 1887 13 313	Cases.	Value
1875	118 151	8719 1317 423 1,578 3 2 902
1577306	25	423
1878 1 080	203	1.578
1879 111	30	3 2
1881 1 530	23 40	1,352
1882 1,770	31	902 1,352 1,277 3,235
1883 3,620	31 67 165	
1885 5,975	179	6,172 9,291 9,717
188610,219	80 215	888
Total 11 000	1,358	810 522
Total 14,262		
TO	MEXICO.	
Years, Gallons,	Cases.	Value.
187511,741	411 638 571	\$5,935 6,165 9,473
1875 0,312	571	9,473
18788.825	4 <u>0</u> 2 453	6,980
18,9 9,100	831	7,553 14,292 12,990
188116 186	631 1,134 963	12,5000
1882 18,107	1,131	20.856
1884 11,467	761	15,929 19,242 16, 65
1885 19,761	761 731 401	19,242
Years, Gallons, 1875, 11,741, 1876, 6,312, 1877, 10,937, 1877, 10,937, 1878, 1879, 1	290	20.023
Total213,129	8,235	
	ONOLULU, Cases.	Value.
Years Gallons, 1575355	103	5 44 4
1876 1,289	<u> 70</u>	1.959
1577 1,986	7.4 73	1,916 737 1,611
1879 2,050	41	1.614
1880 1,131	306	7.915
1881 695	153 287	2,165
1883 2,392	133	3,474
1881 2 762	1,567	8,310
1886 11.096	2,502 1,520	44,565
Years Gallons, 1875 358-874 1,289 1877 1,280 1877 1,280 1877 1,280 1877 2,050 1880 1,131 1881 911 1882 2,695 1883 2,392 1884 2,792 1885 8,737 1886 11,096 1887 71,150	612	1,614 7,915 1,718 2,165 8,474 8,510 14,178 44,565 62,877
Total135,306	7,743	8145,527 —
	EUROPE.	Value.
Years, Gallons,	Cases 360	Value, \$2,773
18764 893	185	1,102 9,504
1877 12,960	31 <u>2</u> 73	9,501
1875 3,191 1876 4893 1877 12,960 1878 2,900 1879 3,326	73 195	2,985 3,483
188096.681	125 171	66,916
1881 1.045	18 73	925
1880 96.681 1881 1,045 1882 2,018 1883 5,220 1884 5,969 1885 7,234		2,280 3,901
1884 5,969	209	G,GGH
1884 5,969 1885 7,234 1886 3,768 1887 26,3 5	218 314	5,889 3,192
188726,3 5	$\frac{314}{1,642}$	20,562
	2	190 141

3.567

	TO J	APAN.	
Years.	Gallous	Cases	Vatue
1875	70	165	8672
	69	199	796
	10	227	1,119
	20	186	937
	3,415	583	4,766
	207	75	180
	832	59	833
	621	1)1	831
	1,095	71	1,179
	1,940	192	2,350
	3.352	260	3,657
	. 10,121	204	4.570
	28,375	526	16,401
Total	. 50,205	2,814	\$38,912

TO	CHINA.	
Years, Gallous.	Cases,	Value,
18 5	37	\$178
187632	35	170
187735	16	85
1878	51	417
187925	31	214
1550	61	152
1881	97	1.240 {
1882	107	1,315
1883 1,740	141	2,173
1881 1,214	62	1.050
1555 1,400	126	1,619
1886 668	673	2 2 1 2
18572,151	302	2,142
N . 1	3 = 1.1	212 (10)
Total 8,708	1,742	\$13,600

TO PANAMA AND SOUTH AMERICA.

Years Gallons.	Cases.	Value.
1875	81	\$520
1876	138	552
1877	107	577
1878 910	131	982
1870 138	142	655
1880	157	1,226
1881	171	2,582
1882 3,117	1.59	2,223
1883 5, 171	191	2,615
1881587	348	2,659
18852,768	130	2,057
1886 18,045	63	13,500
188726,149	67	11,15+
Total63,198	1,888	811,209

TO OTHER COUNTRIES

	10 Other	COUNTERES.	
Years	Gailons.	Cases	Value,
1875	5,915	1,081	87,932
1576	6,891	776	7.078
	1,163	102	3,764
	7,812	246	5,898
	5,295	295	4,630
	10,133	271	11,565
	4,126	227	1,260
1882	9,315	4.51	11,000
1883	11,130	303	7 446
1884	8 053	155	6,916
	11,556	192	8,797
1856		259	6.459
1887	28,804	300	15,545
Total .	. 125,190	4,688	\$100,295

THE GRAPE CROP SAFE.

Gustav Eisen writing in the Fresno Expositor says:

The usual climatic conditions of the past few weeks have caused serious alarm among many win growers, and quite generally the fear was expressed that the grape crop was scriously damaged by the rain, A close examination of our principal vineyards has satisfied me that, as could have been expected, not the least damage was done, and the fears were entirely unfounded. What really might have been to fear was a severe haitstorm, which happily did not come, and from the lateness of the season none is now likely to come. Indeed, I have never seen a hailstorm or snow later than the beginning of May, and happily only twice in sixteen years, both times doing no serious damage.

Many of our anxious vinyardists feared that the rains either would destroy the pollin of the vine blossoms and prevent them from setting, or cause a general mildew on the vines. Neither has so far appeared. As to the destruction of the pollen by rain, I b lieve it has never taken place. The pistil of the flower is pollenated immediately upon the bursting of the pistils, and sometimes even before. A shower of rain would therefore not injure any flowers already open, as the fertilization or pollenation has then already taken place. Nor would the rain burt the unopened flowers, as it could not penetrate to the interior s132,481 parts. Only uninterrupted rains for weeks

without intermediate sunshine would cause harm and rot the interior part of a vine flower. Such, however, would never be likely happen here, at the time the vine bursts into flower. But suppose even the pollen of some flowers would have been destroyed, enough unopened flowers would remain, which, opening later, would supply a thousand times over the quantity of pollen needed for all the flowers of the vine; so bountiful is nature that the pollen from a few flowers would suffice to pollenate a whole vine.

The mildew again, which was feared, has not made its appearance, and in prop rly conducted vineyards is not likely to. Vineyardists who believe in sulpharing their vines not once but several times, have already in early spring guarded against any injury thrt might be the effect of the continuous rains. The mildew which causes the young vines to drop the berries, is now not likely to do any more harm, the grapes already being set, and the summer mildew is not likely to appear n any vineyard which has been properly alphured at all. The second crop olossoms may be attacked in vineyards which have been sulphured, but such chould not be a serious misfortune, as the irst crop, if well cared for, should be all he vine should be allowed to carry. It would be better the second crop could be liscarded entirely, and if the labor probem was not in the way, probably our most successful vineyardists would cut it off shortly after the berries had fairly set. The rain so far has done no injury, but on the contrary been enormously beneficial. Thuuderstorms or spring showers while forming hrough the air absorb a large quantity of ammonia and carry the same to the ground and to the foliage of the plants. This ammonia is one of the most important of plant foods, and the greatest fertilizer of the ground, and is eagerly absorbed both by leaves and roots. It is this ammonia which gives the plants the bright and vigorous appearance so noticeable after a heavy or sudden shower of rain. The benefit our vineyards have received by the late rains is thus incalculable, and the same contribute mainly the extraordinary yield of grapes now promising. The first leaves were badly punctured by the vine hopper and weakened. The vine has made these stronger and is besides pressing most vigorously a second erop of branches and leaves, which are destined to shade the young grapes, when the old ones mature and fall off. Without such a vigorous second growth few vineyards will produce a first-class raisin, ripened in half shade and untouched by the burning sun. The May showers have in turn been a great blessing, and the vineyardist should rejoice in them.

San Francisco, June 1, 1888.

The Bradstreet Mercantile Agency reports 110 failures in the Pacific Coast States and Territories for the month of May, with assets \$2,753,105 and liabilities \$4,472,071, as compared with 65 for the previous month, with assets \$234,074 and liabilities \$475,878, and 67 for the corresponding month of 1887, with assets \$129,888 and liabilities \$191,190.

The failures for the past month are divided among the States and Territories as

State.	No.	Assets.	Liabilities.
alifornia regon fashington T.	87 14	\$2,626,655 87,800 83,600	\$4,192,590 209,746 69,735
asumgton r.	110	\$3.753.105	\$4.472.071

CHEDILOIS HUMANITY.

The New Orleans Medical and Surgical Journal recently published an instructive paper by Honry Dickson Brans, M. D., on the popular medical superstitions of the day, from which we condense the following interesting abstract:

All of you know, I suppose, the behalf that a potato carried in the pocket will cure hemorrhoids or theumatism. Perhaps the "buck-eye" (aroulus flura) used in the same manner is more familiar to you, for in the Southern and Western States these therapeutic properties are arcribed to this seed. I have known a most intelligent gentleman wear a string of amb r boads about his neek to prevent asthmatic attacks and another a necklace of coral to avert an apoplectic scizure. The negroes of Mary land, Virginia and the District of Columbus assert that a mole's foot out oft and hono around a child's neck will keep it in teeth ing. In parts of Pennsylvania the superstitution prevails that bleeding from the pose may be arrested by the recutation of certain words from the Bible by an occulperson-i. e., the descendent of a seventl son of a seventh son. To relieve the pangs of toothache a branch is cut from a sweet appletree during a certain phas of the moon; both ends of it are sharpened, and the "occult person" with it pricks the gum until it bleeds. Stump water-the water that gathers in an old stump-is regarded as a sovereign remedy for freekles. but to be efficient it must be taken before laylight on the first of May and the two 'ollowing mornings. The chances for sealth and long life of a puny child are hought to be improved by boring a hole in tree, nutting a lock of the child's hair in he hole and plugging it up. The use of ye-stones, the crystalline lenses of crabs add crayfish hardened by boiling, and flaxseed for the removal of foreign bodies seem o me mainly superstitious, though occasionally, perhaps, the offending particle dheres to the stone or seed and is removed vith it. But we must class as rankly supertitions the employment of head lice for he cure of corneal paunus, an instance of which occurred in the practice of Dr. A. D. Villiams. Our fellow townsman, Lufeadio learn, who is curiously learned in all uch lore, says that "in New Orleans smong the colored people' and among many of the uneducated of other races, the vicim of muscular atrophy is believed to be he victim of vondooism;" and "that it is langerous to throw hair combings away astead of burning them, because birds may reave them into their nests, and while the est remains the person to whom the hair pelongs will have a continual headache.

In the vicinity of Stamfordham, in corthumberland, whooping cough is cured y putting the head of a live trout into the atient's mouth and letting the trout reath into the latter. Or else a harry aterpillar is put into a small bag and tied round the child's neck. The couch ceases s the insect thes Anoth-reure for whomng cough is offerings of hair. In Sunderand the crown of the head is shaved and he hair hung on a bush or tree, with the all fuith that as the birds carry away the isir, so will the cough vanish.

In Lincolushire, a girl suffering from he argue, cuts a lock of her hair and binds around on aspen tree, praying the latter o shake in her stead. In Rossbire, where iving cocks are still occasionally. burned as sacrificial remedy for epilepsy, some of he hair of the patient is generally added sprained linds

to the off-ring. At least one holy well in In land (that of Tubber Quan) requires an tumor the increscopical anatomy of which no ther, from maternal solicitude, refrainoffering of heir from all Christian pilgrims approaches so closely the malignant type, jung from washing her baby's head lest it who come here on the last three Sundays in June to worship St. Quan. As a charm against toothache it is necessary to go three around a neighboring tree on the bare knees and then cut off a lock of hair and tie it to a branch. The tree thus fringed with hum in hair of all colors is a currous sight and an old ct of deep venera tion. The remedy for a toothache at Tayis stock, in Devonship, is to bite a tooth from a skull in the churchyard and keep it always in the pocket,

Spiders are largely concerned in the curof ague. In Ireland the sufferer is advised to swallow a living spider. In Somerset and the neighboring countries, he is to shut a large black spider in a box and heave it to perish. Even in New England, a langering faith in the superstitutions of the moth r country lends to manufacture d spid-r-w builts for the cure of ague,

In Devenshire, the approved treatment or scredula is to dry the hind leg of a toad and wear it around the neck in a silk bag. relse to cut off that part of the living eptile that answers to the part affected. and, having wrapped the fragment in parchment, to tie it round the sufferer's neck In the same county the "wise man's" remedy for theumatism is to burn a toad to ishes and tie the dust in a bit of silk to be worn round the throat. Toads are made to do service in divers manners in Cornwall and in Northampton for the cure of nosbleeding and quinsy; while "toad powder," or even a live tond or spider, shut up in a box, is still in some places accounted as us ful a charm against contongion as it was in the days of Sir Kenelm Dighy. The old small-pox and dropsy remedy, known as pulvis orthiopicus, was nothing more or less than powdered toad.

Frogs, too, are considered remedial. Thus, frog's spawn placed in a stone jur and buried for three mouths till it turns to water, has been considered wonderfully efficacions in Donegal, when well rubbed into a rheumatic limb. In Aberde nshire, a cure for sore eyes is to lick the eyes of a live frog. A man thus healed has hence. forth the power of curing all sore eyes by licking them! In like manner, in Ireland, it is believed that the tongue that has licked a lizard all over will be forever endowed with the power of healing whatever sore or pain it touches.

In some of the Hebridean Isles, notably that of L wis, the greatest faith prevails in the efficacy of perforated water-worn stones, called "simke-stones,". These are dipped into water, which is then given to cattle or as a cure for swelling or for snakebite. If the stone is unattainable the head of an adder dipped in the water gives an vually good result.

In Devenshire any person latten by a uper is advised to kill the creature at once and rub the wound with its fat. It is said that this practice has survived in some pertions of the United states, where the flesh of the tattlesnake is accounted the lest cure for its own late. Black, in his "Polk | Medicine," states that the belief in the power of snake skin as a cure for rheumatism exists in New England. Such a be lief is probably a direct heritage from

In Ducham an eet's skin, worn as a gar ter tound the naked by, is considered a preventive of cramp, while in Northumber-land it is esteemed the best bandage for a

that while its clinical behavior is so entired should come to have water on the brain; ly beingn, may be said to be fairly in mounting a bloke with healing salve to crusted with superstitions. I have heard our a wound be it affected. rubbing with a pea, a proce of meat, stolennorth-east corner of the house under the blows them away. "The Northumbrian the wart with it, and then impale the small on a thorn hodge. As the creature wastes away, the warts will smely disappear. In the west of England, o.1's blood serves the same purpose." The b havior of waits it so unaccountable--"they come like water and like wind they gott with ss the sudden outbreak of crops of warts upon the hands of cleanly persons, the disapperance of many warts when one or two in the neighborhood have been removed by the action of caustic, that we can readily explain many of these beliefs as originating in cases of coincidence mistaken for cause The same explanation probably applies to the cure by very small dises of magnesium sulphate taken every morning, and to the origin of many of the other superstitions I have mentioned. In still other cases an until the stone refuses to "cling," when essential and very useful part of the practithe cure is accounted complete. Bites of tice has been omitted through ignorance or stubidity, and the remainder has survived to exerte our wonder at human credulity | Th. application as far as I have been able and love of the mysterious. For instance a bit of earrot or onion is sometimes pushed into the ear to relieve car or toothach. Originally, doubtless, the succelent vigotable fragment was boiled and introduced drawn out while very hot, and the calorie did to a cer tain degree relieve the pain, for I have often known persons to apply a hot opion to an aching car and obtain comfort. But if we can thus explain a number of these popular delusions in this way, what are we to say to the two following:

The British and Colonia' Demonst relates that a currous display of superstition was lately witnessed at Maryhill, where men les and whooping cough were prevalent travelling candy man and rag gatherer's eart, drawn by an ass, was standing before a row of houses a little off the highway Two women, each the mather of a child suffering with whooping-cough, took up a position one on each side of the ass. One woman then took one of the children, and passed it under the ass's helly to the other woman, the child being lebb with its face towards the ground. The accord woman caught the child, and giving it a gentle somersunit, handed it back to the first woman over the ass, helding its face to wards the sky. I ach child was so to atcathree times, after which the ass was allowed to cat something from the chill's hap. Subscept at impury showed that the mothers, whose number heal been more used true there as preded by no more profitable by two others during the a remone, were thoroughly satisfied that their children were the better for their sis brinting it.

In an address on the Psychology traition of what he calls? Montal Diplopia? greatly in favor of the raisin grape is that Killing a rabid dog to prevent people at hit is a sure crep?

The common wart, that emions little pooly bitten by it going mad, a cleanly

And apropos of tabid dogs, one word or otherwise procured an apple, a potato. Four mod stones. Every now and then all of which are burned and allowed to rot the daily papers give us accounts of maraway, highly extelled by persons in all velous cures wrought through the influence classes of secrety. My Pennsylvanian of molestenes, and by collecting these I authority states, that in his part of the have come into pessession of some valuaworld the favorite cures are rubbing with a ble facts. Process as they are, there potato, which is afterwards thrown to the poems to be quite a number of these stones hogs, or tying a knot over each wart in a in different parts of our country. Virginia, bit of string, which is then burned at the Gorgia, Missouri, Kansas and New York record in the presence of one or more, caves. They may be cured by the "occult The store is usually small, porous and of a person," who atters certain words and dark color, though the Kansas stone is described as "nearly white". In all cases cure for warts is to take a large small, rub the mode of application is the same; the stone is applied directly to the late or to an incision in the neighborhood if the would be envenomed the stone clings tightly, for it possesses diagnostic as well as therapeutic virtues, and the person to whem it refuses to adhere may dismiss care from his mind and go on his way retoreing. On the other hand if the wound be a poisoned one, after "chinging," the stone is observed to undergo a change of color, the fint varying in every instance Thave seen reported from a "poisonous green to that of a fresh oak leaf. This Using accomplished, the intelligent mineral, like a sated leach, drops off. It is then sonked in warm water or milk, when the charge of poison being removed it resumes its former color, the process is repeated poisonous scipcuts, scorpious and even stoders are treated in a similar manner. to gather, is usually painless, but in one case has the stone adhered a scream of nnatt rable anguish «scaped from the lips of the suff rer, as if life itself was being

PAPER BOTTLES.

One of the most interesting of many use 8 to which paper has been put, observes the Schul fo America, is the manufacture of paper bottles. They are made by rolling gland shorts of paper into long cylinders, which are their cut into suitable lengths, tops and bottoms are fitted in, the inside coated with a wat it proof compound, and all this done by machinery almost as quickly as one can count. They are cheaper and lighter than glass, unbreakable, and consequently popular with consumers, while the fact that they r quire no packing matered and an clean, handy and economical, commond them to manufacturers. Unlike glass, they can be manufactured and shippod at all seasons, and being made by machinery, the supply is and pendent of tidear troubles, which are additional advantages to manufacturers who use bottles

Baisis Grayes (T Stamps, a practiil grower of raisin grapes for eleven years at Orange, writes to the Los Angeles, Trito that, wan the whole rouge of fruit colcompution than the cultivation of the Musster rusin grspes. Other front creps may isturn a larger bet profit occasionally, but for a sur- and steady inco is a 1 know of Joking Dr J. H. Jackson gives an illus mone that excels the grape. One thing

RAISIN GROWING.

The following paper was read by Supervisor T C. Whit of the Risina vineyard near Fr suc, b tore the State Vitienhural Society at its need in meeting :

The subject assigned me for consideration and to which I make your attention is the raisin grape. While I do not expect to add to the information of many who have been long sugaged in the business, still there may be some to whom the results of our exp mone may be interesting if not profitable.

Ten years ago I was among those seeking knowledge, and found a most efficient t acher in R. B. Blowers, Esq., who kindly gave me the benefit of his experience in the then comparatively new field of raisingrape culture

The success achieved in the past few pears has outgrown a local interest, and is now attracting a world-wide attention. The following table shows the growth of the industry:

1573.																,			,		0,10.0	
1874									,			,							,	,	\$E()(10)	4.4
1875																					-11.000	
																					19,000	5.6
																					32,000	1.1
					ì																45,000	4.4
1870.																					15,010	4.4
																					-75,000	n 4
1551		ì	ì		ì		i	ĺ,	į.	,											31,000	1.4
1882.	i		ĺ	ĺ		Ĺ	ĺ		į							,					115.000	4.8
1553.	Ī	ì	ĺ	Ĺ		ĺ	i	i	Ì										,		140,000	4.7
1554		i		ĺ	i	i	į					,					 				175,000	4.4
1555	•	•	•			Ĺ		i	ĺ	ĺ	ĺ	Ĺ	Ĺ		ĺ						500,000	6.4
1556	•	•	ì	ì	Ì		ĺ	ĺ		ĺ	Ì	Ī	i	i			i	į			703,000	4.6

In 1873 the raisin crop of the State was estimated at 6,000 boxes, swelling to the comparatively enormous number of 800, (0) boxes in 1887, and may reasonably be expected to reach 1,000,000 box s the com ing year.

It has been demonstrated beyond question that the soil and climate of portions of this State will produce a grape equal in size and quality to those of the most favored districts of Europe.

Permit me to make a few general remarks in reference to the soil, climate, culture and variety's to be grown, and the best manner to pick, dry, sort and pack rai-ins for market

In geographical distribution the yield is divided by tween the great San Joaquiu valley and Southern California. No raisins are produced in any quantity outside of these two regions. The crop of the valley amounts to 5,5,000 loxes; that of the Southern countres--Los Angeles, San Bernardino and S.n Dieg - to 295,000. Fresno takes the lead with 350,000 boxes, nearly double the lead of any other district and meanly as much as that of all the rest of the State combined. Riverside comes next with 180,000,

While I have visited the raisin-producing sections of the State, north and South, my remarks are based upon the experience gained during the last few years in Fresno, in the San Josephin valley. The following requisites are malispensible to the successful production of good raisins, Soil, cli- th to a conmate and methods of picking and curing First, a selection of location with reference to soil. This, in my judgment, is either the white ash or the red, sandy loam. If your "lines be cast" in the San Joaquin valley, which I believe to be the best for g this industry, be certain to obtain land which can be conveniently irrigated.

not too strongly impregnated with alkali. So far as I am informed, the first raisingrape cuttings were imported by the elder Haraszthy in 1862. These were the Mus- convenient to handle when filled. Trays cured, take a raisin between the thumb and its surface, which plate forms the bottom

catel Gordo Blanco : later there were other importations which were sent to different portions of the State, and assumed the names of Museat and Museat of Alexandria, causing much diversity of opinion in reference to identity and respective merit. "When doctors disagree, who shall doeide?

My vineyard is exclusively Muscate) Gordo Blance, which I consider the lest on account of its uniform large size of berry throughout the entire cluster, small siz and number of seeds, tender skin, richness of pulp and high flavor.

The vines should be trained low and pruned short, and great care and judgment should be exercised in this matter, so as to leave the vine well balanced, not having more spurs on one side than the oth r, and also leaving top spurs with a view to growing wood for shade.

Another important consideration is the removal of all suckers and non-fruit producing growth to avoid the diversion of the strength and vigor of the vine from the fruit and growth of wood for the succeeding year. The vineyard should be plowed and cross plowed as soon as the vegetation starts in spring, and cultivated thereafter continuously until prevented by the growth of the vines.

Much can be done toward destroying the vinehopper by thoroughly stirring and displacing the soil immediately around the vine early in the season.

To assist in accomplishing this, plow away from the vine, then shovel directly around it, and then cross-plow, turning the furrow toward the vine.

Another important aid in destroying this pest, is sulphuring, which should be commenced as soon as the vine has put forth a new growth of one or two inches. Just before blooming sulphur a second time, and in localities liable to mildew, a third applieation may be beneficial. Couleur, or the blasting or dropping of the bloom, is probably caused by sudden changes of temperature, strong winds and excessive moisture. When caused by the latter, it can be largely overcome by the application of sulphur. As vines become older, I think they are less susceptible to elimatic influences. Irrigation at the blooming period should be avoided, and until the berry is well set.

If summer irrigation is necessary it should be done by means of furrows, through which the water is run.

Plowing in these furrows will prevent the cracking and drying out of the land.

In Fresno, picking commences about the 1st of September, asthough there have been seasons when it occurred as early as the 90th of August.

The grapes under no circumstances should he picked for raisins until they are ripe. There are three ways by which to ascertain this fact-first by the color, which should be a light amber; second by the taste, and third by the saccharometer, which is by far

- Incking.

The most practical method of drying is My own chace would be white ash, if The almost entire absence of dew in our locality greatly facilitates this method.

The trays are usually 24x36 inches

pounds of raisins.

birgely upon its age and favorable conditions, varying from 2 to 9 tons per acre.

The trays or platforms are taken into the field and distributed along the sides of the roads, from which they are taken by the pickers as they are needed. As the grapes are picked from the vines, all imperfect b rri s, sticks and dead leaves are removed from the bunch's, which are then placed upon the trays, right sid up. A cluster passed thr ugh the sweating process. has what is called a right and a wrong sid , the wrong side having more of the stems. the bunch sonly by the st-m. If the berinjure the appearance of the raisin.

The trays are placed after filling between the vines, one end being elevated, so that the grapes may receive the more direct rays of the sun.

The length of time required for drying depends much upon location and conditions, favorable or otherwise. I have known rai sins to be dried in seven days, but thy were not a good article, and too rapid dry ing is not desirable.

The grapes are left upon the trays until about two-thirds dry, which, with us, will be in from 6 to 8 days. They are then turned. This is accomplished by placing an empty tray on top of the one filled with partially dried raisins and turning them both over. Then take off the upper or original tray and you have the raisins turned without handling or damage.

After turning, enring proceeds more rapidly, and frequently is completed in four or five days. During this time they should be carefully watched, to prevent any from becoming too dry. When it is found they are dry enough, the trays are gathered and stacked one upon the other as high as convenient for the sorting which follows. This protects them from the sun and prevents overdrying. Stacking should be attended to early in the morning while the stems and berries are slightly moist and cool from the night air, as they will retain this moisture after being transferred to the sweat-boxes and assist in quickening the sweating process.

The trays which have been stacked are now ready for sorting and grading, and this requires care and judgment and, although a tedious process, greatly facilitates rapid

The sweat-box is a little larger than the tray, and about eight inches deep. When fill d these will contain about 125 pounds of raisius. Heavy manilla paper is used in the boxes, one being placed in the bottom and three or four more at equal distances as the filling progresses.

breaking of the binehes when removed for

The sorters have three sweat-boxes-one included for first, second and third qualities, as the grade will justify. The bunches should be handled by the stem and placed carefully in the sweat-boxes to avoid breaking the the clusters.

Any found to be too damp are returned to the trays and left a day or two longer in

of the former size hold about 20 pounds of first finger and roll it gently until softened, fruit, and should produce from 6 to 7 when either j lly or water will exude from the st m end; if water, it requires further The product of a vin-yard depends drying. When the box's arc filled they are taken to the equalizer. This should be built of brick or adobe and as near airtight as possible, but provided with windows to allow of ventilation when necessary. The windows should have shutters to keep it dark. The fill d boxes are placed one exactly upon another to a couvenient hight and should remain from 10 to 20 days or more, whin they will have

As the misins are taken off the trays some of the barries on the bunches will be sposed than the right side. Great care, by enough and a few will not be suffishould be used in picking so as to handle creatly cured. To remove the moist ones would destroy the appearance of the clusries come in contact with the hands some ter, and to leave it out long r would shrivel of the bloom will be removed which will the dry ones, hence the sweat-box. The moisture is diffused through the box, some b ing absorbed by the dry raisins, and the stems also taking their share, and are thus rendered tough and pliable and easily manipulated when ready for packing, When the raisins are sufficiently equalized, the sweat-bexes are removed to the packing-room, which is provided with tables, presses, scales, etc. My method of packing is substantially the Blowers' style, face downward. The most convenient mode of packing is by the use of a metal tray corresponding in size to a layer of raisins and having a loose bottom. The raisins are placed in a preliminary packing tray with the face of the cluster downward, which gives the surface a level appearance and prevents the exposure of the stems. When the bottom of the packing tray has been covered, which should always be with perfeetly shaped berries and bunches, the tray is filled to the requisite weight of five pounds. The contents of the tray are then pressed sufficiently to pack the raisins firmly together, but not with such force as to break the skin, causing the jelly to exude, and consequent early sugaring.

After being pressed they are transferred to the boxes, during which process the paper is wrapped around each layer. The paper is placed on the top of the tray of raisius and a sheet of steel the exact width of the tray is placed above the paper, and the whole reversed. The sheet of steel serves to hold the raisins in place until the layer is put into the lox, when the steel is withdrawn and the layer drops into the box -face np.

The standard box of California raisins is 20 pounds weight, containing four layers of five pounds each.

They are usually graded into Dehesias, Loudon Layers, Layers, and one, two and three Crown Loose Muscatels. The Dehesia or highest grade, is packed with a view to superseding the imported article, which sells at from \$10 to \$12 per box.

Every one who has seen and admired the boxes of imported raisins, which have a The object of the paper is to prevent the boxes of imported raisins, which have a tanging of the stems and consequent top layer packed in rows with uniform regularity : few, however, appreciate the difficulty of producing this handsome appearance by hand. The task is slow and tedions. To simplify and expedite this process, I have invented and received letters pat at for a packing-plate, expressly adapted to producing this effect. This device will by the use of trays placed upon the ground, stems, thereby destroying the symmetry of prove of great assistance to the raisinpacker. I have used it through two seasous with perfect success.

The invention consists of a flat metal Those of larger dimensions are found in the sun. To ascertain if they are perfectly mold or plate, having depressions made in det rinings the grad-

bish, is is child by mid-up of a tais, in these islands, and the labor of strongs reports have been prepared on the for sis X in can be call say particle derivers time course of being say 1 by the most of these colonies look did we are even complete since safelly participal means. with the nations who is much this sub- The chief car at present should be do ditions affecting entireation in the West | S. D. J. Sesser and S. jeet and and istry a strily for elements.

regard to off contact observation to way grounds," of attractive wrappers and comes.

The and stry with us is in its infately market and the greening for ign demand. 1.15

Much may be accomplished by a free opportunities for said conformers.

VEGETABLE RESOURCES OF THE

Address by Mr. D. M. rris, M. A. E. L. S. delivered before the Landau taxable ratt to proceed.

Competition by 52

There is I rac a shy viry little band in the W st labes win hars not equable or som cultivation. It should be no mb red that the vast train bistry of C you, now worth £500,000 and ally, his bin establish differ the most part on exhausted a flee lands. The Sisal homp and istry of Yacatan, of the annual value of a crly a malion sterling, exists und r such conditions in few of the West Indicasion is.

There is not lock of good so is with $\langle W \rangle_{st}$ already been und recitiver in and that it. St Vine it, St. Lucivand Autigut, together is nearly exhaus d. It is true that much with the colony of British Honduras. land once under sight has been abandoned. The reports of all these have already But it is these lands who how support a been issued, with the exception of Antigna, flourishing front and istry. The haby lands and the r port of this latter in the press th many of the West India islands are prace. These reports have been prepared with neally untouched. Only about on eighth great care, and they cannot fail to have an of Trinidad is occupied by carts inon. In approximate off et upon the treatment and Jamaica, in the Box Mountain districts, management of the forests still left in the there are more than 100,000 acres admir- West Indies. These forests are necessary ably adapted for the greath of tea coffee historily as reserves of timber to supply and can home, while furth row stith recars future wants, but as also a means of mainat the time of their discovery.

terior of the islands, and railways were measures at best adapted to prevent ex- jungle and run its extended connecting the centres of pro- tensive and reckless cutting down of forests available for cultivation would be sufficient | prosperity

not dispresent the rich and firth limits Indies, and I shall now give a brief account Not only by the case has been quartey that me the West Index being destroyed by the of the local in histories. quantry, but, in this estimated, and waisteful system of negro reprovision This system is a relic of the low d to grow provision for their own subcomparatively, will would be have some sistence on cortain persons of the estate to Dominica, it is no riving considerable at cause for congratulation, still we have much, which they belonged. Under the present tention. I should regard casao as essingo berra before a carrian perfection. In combitions, such a system is most differref rance to shapping, it is to be happen mortal to the negrous themselves, as will that the non-fitting analytiming us botter as to the best interests of the islands. To facilities and chaptrates of fright, allow the negroes to destroy acre after thereby enabling as a supply the East rul agre of the best would ind, even on a payment of a nominal rait is occuomically In delay in a particular that all and soft in stabilitions. It procheally amounts to rusins ar scarce in the home maket and an organized system of impoverishment of insuffice at the another color is a base been the soil, which in other colonial has been next crop. May has been dealer to us suppressed by strict legislative ensetments, to mercas, and which industry through This "provision ground" cuntivation has a the length and breadth of our mond vale direct bearing upon the labor supply, and it should be dealt with by the legislature as a serious economic problem, on the soluintrohangs fall as and comparison of mon of which the future welfare of the notes in reference to meth 4s at in suits, islands depends. If the labor of negroes, Local and State a swentens off it good now expended in fitfully raising a few yans and cocos, was concentrated upon permanont plantations, the wealth of the islands would be enormously increased. At present the land is being system itically imporerished in rely to supply the negroes with the bare means of existence. If once the negroes were taught to abandon provision ground cultivation and depend upon permane et cuitivation and upon wages, the "labor question." In the West Indias generally would pr sent no more difficulty than it does limited supply of negro lab a. It is no dless to say that it has no "provision grounds," for every acroad land is under cultination, and yields aband int crops

aridity and sterility of soil as are found. An inquiry has recently been made into the condition of for st growth in the West Indies by Mr. E. D. M. Hooper, of the Indies. It is too commonly assumed that Indian Forest Department. The islands most of the rights along this asserteds has visited were Jamanea. Tobago, Grenada,

of the preliminary packing box, and serves to maintain a prosperity greater than any- It is hoped that these for streperis will be a less in get a to hold the raisins in a fixed position until thing yet seen in the West Indies. This serve is a basis for useful bigislation in the 17,000 In rethe packing is completed and the raisins prosperity. I feel convinced, must come West Indies, and that all concern dayal resolvents. are placed in the rusinels v. L. os. Mas. sooner or later. The rush of planters east girl a rational system for the proservation will be seen caters are prepared by body put torough wards has gone on so long that a reaction of firests, and for monitoring the formaty width of the strain and good reaching the format for monitoring the format with John Collection to the strain and good reaching the format format for monitoring the format format for monitoring the format f the seminated great. In strain tree in axor of the wise in counts any of the sentest managed can be twent as a seriest managed of the sentence of the seriest managed of the seriest ma I do not propose to reopen it. I would fortunately, arrangements were not made By observing the foregoing remarks, you could man that there is no doubt as to for meaning Domaines. Transfel, and Jenous in the second will be ready as a set that the raisin the rapid mere use of the block population | Brush Gurana in the inquiry and home no

 $\frac{1}{t} = 1 (h) \omega_{t}$, so far, discussed the general con-

N at to sugar the most important in-Listry is cacaco. This is the second largest times of slavery, when negro s were all industry in Irinidad, the chief industry of Grenoda, while at Jamaca, St. Lucia and tirily a West India industry. It is in every way suited to their circumstances as regards soil, climite and labor supply, and the consumption of cacio is steadily increising. Carao has not been so successful in Coylen as was once anticipated, and honce the West Indi sish old make cacao growing an industry second only to sugar. Coffee cultivation is confined chiefly to Jamaica. The high lands in Tribidad St. Vincent. St. Lacus and Dominica ar well suited for coffee plantations, and if the product were well card the results would be as generally remunerative as they ar with best the blue mountain coff e of J. manca,

We have heard a great deal of fruit cultivation in James 4, and the important position to which it has attained within the last ten years. This infastiy is new of the annual value of nearly £300,000. It is capable of such further expansion if once a fruit trade was opened with Lar spec Messes. Secutions have shown that it is possible to bring West In him fruit to this country in excellent condition, and if satisfactory arrangements were made at this end to dispose expeditiously and remuneratively of in Birbad's. This island posses an un-tibe fruit it could be grown to almost any extent throughout the islands. I regard the growing of bananas as, after all, only a means to an end. The custivation of this plant on the same and is distinctly limited After a certain time even the best land b. comes exhausted for this crop, but is will suited for the feultivition of excise, coffer, spices and coclamits. Wherever bananas are grown for fruit, provision should be made for permanent plantations of something also to take their place. If this is not done, and the land is a coast to hips into "rumate," banana-growing scar - by rises superior to the operation growing of the merces. This is a subject which I have urged upon the attention of planterin Jamaica, and I b have with some off of It all banana plantations in Jamana, to c into is d for growing trust, were systematic and satisfied I in suitable . This with er and the results, ten years home, we will 200,000 acr s smited for the cultivation of taming die humality of climate, and productive cacco industries of Frinds land oranges, eleso, spices and abre plants teeting the sources of springs and rivers (termila). Where clear earn it begrown The high lands of St. Vinc. nt, St. Lucia. Mr. Hooper has dealt with the nature, exclusive contracting and spices, and if and Dominica are as inneent of cultivis tent and value of West Indian timber trees, these are unsuitable, no land which can tion as they were four hundred years ago, and he has brought together along amount great bananas, will fail, at least, to great of useful information respecting the condi- coccounits. It should never, and roany If good roads were opened into the inetion of the interior of the islands, and the circumstances, be allowed to lapse into

The emchena cultivation in Jamaica. which is now established over some 5,000 Many of the trench s wir in 1 and with acres in the Bine Mountains has latterly wirms however. To describe disclorable, duction with the shipping ports, the lands necessary to their well-being and future which is now established over some 5,000

If $1:=_1$ Mountain collistors 1. saittest the constyle to a second ten. Harrist is start with it mixing [1] of a large tibish din Jama at mand, there is recall for The map stadity to a shall give posted would mare than a rate with labor, while an error is the convergence might raisonly be a reful Insgreath of film places has been seen in rethon one in the West I has, and evan new ther is an attempt being more to establish plant it its of Roma, or Course gress. I im obserly a partner that the greating is still in the experience and evil 1 110 most promising for collisty sufficients erroumstances of the West I has as that of Soul homp Adverse to Transparticulars of this are given by the $A(\tau,B)$ of the March, 1887. An importance of the form species funly establish I in the Lagran a plans in Jamaica and some period Baronlos and Antigue. Nothing is reportable to map out plants from Yazatan suchment to stablish about 780 are smill eventions on the land tor five or six years when they would be nt for cutting. M. an share hom regularly us dom lit also, which are known to be if the improbability a mirketable fibr . There is nothing speculative er uncertain about the reliestry. The profits are sured, but so are the risks. A small lider supports only no serry, coll the soil to grow the agree plants and may be hot un I poor.

Spices, such is naturally, and a uniform-Lamons, have be neared ashary established in the note, where also them I mean has shown what may be loo with odd sagar (statis to real total), baset productthe and remainerate. This should is dis-The expert of space from the relief is 1885 amounted to 1870 at, it to evidence of £752 This was not prove to the eass many other menor milestres. Lan cultivation of limes for any the audoffice of a forest at the colour races annalas, mirrotra in hadrads. sarsquanta, papers turn and a second -- tis 11 multiple abstracts are the following upon the islands, and our the arrange stances are favorable, they have a very n ourse in Li

A DESTRICTIVE PEST

S mater Stand of save yor lot Vina, it is reported, recently so quilitater listens to m. The viney or I, and the enter or in hem facts was theel Thy the array as in and desiles tion was spread in every hand. The vinyarlasequedt tard stratue. prompt actions (H. W. M. I. tyre, the superintendent. He hal tracks lugle for the army. The trenches were made by plowing a farrow oil showing out the boos earth. The worms of I not cross the trenches, as they are a table to climb.

ALCOHOL IN FRANCE

The San Jose Herald in discussing the instructive report of J. L. Rathbone to the Department of State, on alcohol in France, says: The substance of it is that the falling off in the production of wine in France, in consequence of the ravages of phylloxera and mildew, has induced an increase in the production and importation of spirits, and also that the constant shrinkage of the grape crop is causing a large production of spirits from other substances, as corn and beets.

The first of these two facts has a vital bearing on society. It has always been the Herald's position that a good light wine, used in moderation, is healthful, and that it tends to prevent drunkenness. It is in the saleons that drunkenness occurs, and is is there that spirits are used. Good wine drunk at home is used at meals, where it aids digestion and counteracts a desire for spirits. It is the greatest enemy that the saloon has to contend with.

It is so in France, according to Mr. Rathbone. With the enormous decrease in the production of wine comes a great increase in the number of saloons. "The continuons increase in the number of drioking houses in France," he says, "is becoming from wine are the best and most wholesome a source of great uneasiness. Their num. ber, which in 1820 was 297,812, reached 399,145 in 1885." That is an increase of over 30 per cent. In 1875 there was one saloon for each 109 inhabitants, and in 1885 there was one saleon for each 94. That it astonishing and discouraging, but the truth does not end there. Of the insane men admitted to the public asylums from 1861 to 1865, 14.8 per cent, were made insane from the use of spiritnous liquors, while in 1885 the per cent, had increased to 21.9. The increase in the percentage of female lugatics was also great, starting with 9.6 in 1861-5 and rising to 14.5 in 1885. All this is better understood from the further information given by Mr. Rathbone of the increase of the consumption of spirits per capita. In 1830 it was 1.19 quarts, and from that time there has been a steady increase, so that in 1885 the average amount of spirits consumed by each man, woman and child in France was 4.07 quarts, or a fraction over a gallon! These facts are astounding, and they go to show conclusively that the bulk of the French people, deprived of their customary allowance of wine, are taking to spirits at a fearful rate, and even greater than here shown, for Mr. Rathbone produces certain reasons for his assertion that "their consumption of alcohol per capita must be eight times greater than that shown in the statement.'

In other words, there is a regular progression, as follows:

- 1. Vine pests cause a decrease in the quantity of wine produced.
- 2. The shortening of the wine crop is met by an increase in the production of spirits.
- 3. The increasing difficulty of procuring wine creates a drifting of the population toward saloons, where spirits are sold.
- 4. This in turn creates a demand for more aaloons, and their number is greatly
- 5. This leads to more intoxication and increasing evils therefrom.

interesting and instructive branch of the common mode of drying is to spread the subject, for it is so plain, so undeciable and so reasonable that no further demonstration is necessary.

subject—one that will prove especially interesting to California wine makers,

It has been known for some time that the wine crop of France was decreasing by reason of the ravages of phylloxera, and that this fact pointed to California as the future wine maker for the world. But Mr. Rathbone's report adds materially to that bright picture, for from the facts which he presents we are forced to conclude that Cu'ifornia will in time be the brandy in ik ir for the world. That in lustry has been controlled by France for many years

Mr. Rathbone expresses the situation in France in these words: "The quantity of alcoholic spirits extracted by distillation from wine-for a long time the only distillation consumed in France—has been gradually diminishing, in consequence of the rayages caused by phylloxera and mildew in the vineyards of France, falling from 18. 148,000 gallons in 1871 to 515,000 in 1886; and to meet the ever growing demand for spirits this distillation has been replaced by alcohol distilled from molass s, beet-rootjuice, grape skins, and from miscellaneous farinaceous substances, especially maize and potatoes."

It is perfectly safe to assume that spirits in use. France is compelled to use inferior spirits for her own use and cannot expect the world to use such spirits in place of the fine brandies that she has been sending out. The United States can make all the grain spirits that the world will want, but there is only one place where fine grape brandy can be made, and that place is California.

This gives the California wing maker a double advantage-he can make his wine into brandy for export, or he can export his wine. In view of these facts it is well to guard the wine interests of this State with jealous watchfulness, for in that direction lies the future greatness of the State.

Already the business has grown at an amazing rate. Fourteen million gallons of wine were made last year, of the value when new of 20 cents a gallon, or a total of \$2,800,000. When bought by the consumer it brings twice as much. The exports of wine by sea last year were 1,896,. 200 gallons, for which \$893,400 was received, and by rail 4,403,300 gallons. The value of the grape product for the last three years was as follows.

4.5	Quantity.	Value.
	50,000,000	\$10,000,000
andy	1,500,000	2,100,000
	. 1,500,000	3,000,000
apes, table, tons		1,200,000
Total	53,040,000	\$16,300,000

000 The wine is put in at 20 cents per gallon; brandy, \$1.40 per gallon; raisins, \$2 per box, and table grapes, \$30 per ton.

All this vast industry has developed in the last few years and is even yet in its infancy. Vineyards are being planted on all sides and in a few years more the product will be enormous. With France failing and going out of the market as a wine maker and brandy producer, the future of California is bright indeed.

RAISIN PRODUCTION.

Several varieties of grapes, observes the Supply Journal, are used in making raisius, but the different names of the varieties of dried fruit are usually given from the It is unnecessary to go further into that locality whence they are imported. The launches on platforms or suspend them on lines in heated rooms, where they are allowed to shrivel slightly. They are then

to each four g dlous of which a pint of oil and a handful of salt is added. This causes the sugar to exude through the skin, and makes a slight varnish on the outside of the fruit. In this way the Valencia raisin, the favorite cooking raisin, is prepared It is shipped principally from Valencia, Spain. Malagas also take their name from the Spanish port whence they are most largely sent. These are mad from a rich r grape than the Val neia, and are dried on the vine in the sun. The grapes do not fall off when ripe, so the stem is twisted and the grap s slarivel by the vaporation of their own water. In this way the fruit keeps more freshness and bloom than in any other, and there is very little exudation of sugar. These raisins are also called Muscatelles and are the favorite table raisins. Spain is still the greatest producer of raisins, though larg quantities are also raised in Turkey and California is becoming an important locality for the production of this favorite fruit. The Sultana or seedless raisins are produced in Tarkey. These are cured in the sun, a light sprinkling of oil b ing employed to prevent the too great evaporation of the moisture, and also to assist in the preservation of the fruit when packed and shipped. The Eleme raisins are also produced in Turkey, and are also used chiefly for export to distant colonies and for ships stores. As their name implies, they are picked raisins, and are picked specially for ship use from the vines of the Carbourna and Vouria districts in Asia Minor. The great proportion of the raisins from Smyrna are known as "Chemese," the name of an island near the mainland. Those are the Turkey grapes, pure and simple, without selection, picking of stalks, or any manipulation whatever. They find a ready market in Eastern countries, but are the special feature of fruit trading between Turkey and German ports. There are vast districts in Persia where raisins are cultivated, but the difficulty of getting them to market is so great that it does not pay to export, consequently they are used for distilling and local purposes. At the Cape of Good Hope raisins are produced which find a market chiefly in Australia. Distillation of raisins into wine is becoming quite an important business, the flavor of the dry fruit giving a very pleasant taste to the beverage. The raisins used for this are the small black Smyrna raisins. The dried fruit known to commerce as the Zante current is a variety of raisin. It is not made from a current, but from a very small grape dried in the sun. These small raisins were at first called Corinths, because they were imperted from the port of Corinth. Their similarity to currants caus d the name to he corrupted later, as many supposed them to be a kind of dried current.

ALCOHOL IN FRANCE,

Report of U. S. Consel, J. L. Rathbone of Paris.

The quantity of alcoholic spirits extracted by distillating from wine-for a long time the only distillation consumed in Francehas been gradually diminishing, in consequence of the ravages caused by phylloxera and mildew in the vineyards of France, falling from 18,148,000 gallons in 1871 to 515,000 gallons in 1886; and to meet the ever growing demand for spirits this distillation has been replaced by alcohol distilled from molasses, beet root jnice, grape skins, and from miscellaneous fariuaceous We now turn to the other branch of the dipped in a lye of wood ashes and barilla, substances, especially maize and potatoes, ago to take charge.

The spirits produced in France are now for the greater part distilled from molasses, From 1840 to 1850 the average yearly production amounted to 1,057,000 gallons. It now reach s 18,494,000 gallens, or nearly two-lifths of the total production.

The distillation of beet root juice is also very important, preducing alcohol of a good quality. The annual production in the period between 1840 and 1850 did not exceed 13,209 gallons. It now reaches 13,000,000 gallons; but nevertheless it now seems to be decreasing slightly, and it is replaced by the distillation of grain.

The production of alcohol extracted from grain, which before the year 1845, did not amount to a great deal throughout France, began to increase about that year, after a severe diseas; had greatly reduced the yield of the potatoe crop. It was stationary all the year 1876, but it is now five times greater than then, maize especially being used for distillation. In 1873 the quantity produced was 2,298,000 gailous; in 1884, .2,813,000 gailons, and in 1885 reaching 13,899,000 gallons.

The distillation of potatoes introduced ato France some sixty years ago, has never gained a great importance. In 1873 the roduction of said spirits reach d 246,000 gallons; in 1885 it was reduced to 103,000 galious.

The quantities of alcohol produced unionbiedly exceed the figures set forth in the published statements, as, since the law passed in 1875, which released landowners and farmers from the obligation of making the declaration required from licensed distillers and exempt from the frequent inspection of revenue officers, there has been a great faccility to defraud the government by making false declarations as to the quantities actually produced.

German alcohol of bad quality is to a great extent mixed with Spanish wines entering France, but which only pays the duty imposed upon wines. This alcohol is atterwards extracted from them, and sold at cheaper prices than French and other toreign alcohols.

The import duty levied upon alcohol entering France has been raised, by a law passed on the 5th of July, 1887, from 30 trancs to 70 francs per hectoliter of pure alcohol (22 to 51 cents per gation). This mereas, of the duty was considered as a kind of retaliatory and projectionist measme against Gormany, where a premium of 44 cents per gallon was allowed by the Government to exporters of domestic alcohols as a reimbursement of the internal tax, while this tax was only 15 cents per gallon.

The statement prepared by the Minister of Finances represents but imperfectly the real average of alcohol consumers. It does not embrace the quantities of alcohol produced by landowners and farmers, nor alcohol fraudently distilled or introduced into France; and, besides, a large part of the population, especially women and children, consume but a small quantity of spirits. Consequently it is to be inferred that only one-eighth of the total population of France drink spirits, and therefore their consumption of alcohol per capita must be eight times great than that shown in the statement.

Messes. C. Carpy & Co , proprietors of "Uncle Sam Winery and Distillery, Napa, Cal.," have opened a branch office in New York City. Mr. V. Hagemann, an employee of the firm here, went East a short time

ewing right to " Sant Car Viv. 1 out flassition. complete at the second perfl - n i' GRAPES IN SANIA CLARA in the last of the while file of the Mart (152 lar to the form words of words such as the THE VIST MOPPLE the part was to the of the factor than the state of the s found to the 1 Another factors innochity assista ; pers i tr ii4 ii is Mr. gray yellor -M not So H dam 2 1 , 1 as do to to to a Villy Maria which, conallow butt vines and become ration of in 15 - v itu r-f water, the army value pect fith ... 1. 1719 than the star for new to be to so carrily is drain long. our some the Our birtigit tits of it is a this received $Th=\tau_{\rm e}^{-\tau_{\rm e}}$ id a viry of the tillion in a v.ti ' ' '' th ' - ' 1 stable $M = K \rightarrow$ miler to " Spring and t year. I. . cur-fit tip niz L '. · · 1023 ---the solution Otal - Comme on $t \mapsto r \cdot t$ of dist . They have plant wh any profrost at line SALL TOR GRAPTS Bar II. $\{[\cdot], [\cdot] \rightarrow \cdot \gamma$ comi... it l friithar as 2 F. 1 1 1.had an int. for . In parel to her to mit that the

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E. C. Hughes & Co., . Proprietors Office, 511 Sansome street. Postoffice Box, 2366

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..... JUNE 8, 1888 FRIDAY

THE MERCHANT has been an obl-time and tried friend of the vitneulturist on the Pacific coast. The records of the commission itself will show the valuable work it has done in assisting the disemination of information on everything pertaining to the benefit and development of the industry, at a time when the outlook was not so bright as at present. At all times free from any party prejudices, which coeep 19 now and again among the untiler-hip of an important and growing organization, the course pursued has, at all times, be in that which tended to promote the well reof all connected with the business. T. m a few acre patches of the commonest varities, we have seen the pleasing increasand improvement as years roll by, until to-day the vineyards dot the Scale from north to south by hundreds plant dewith rare and choicest kinds of foreign fruit.

The MERCHANT is essuitably a vitroiltural paper. The only one on the West in coast which devotes its columns exclusively to the interests of the grapes, wers and wine-makers. It is at all the analytic with the latest information, for all and local, pertaining to this imposite that Every vineyardist should ke ; it in file for r.ady reference. White it Lie anways enjoyed a liberal patronage at home and abroad, subscriptions are so it learning those who have recently swill have a of vine and olive growers. Sa. ala. suggestions in an hour of had may see many times the annual sul- apparen.

THE WINE STATISTICS compiled by Mr. Arpad Haraszthy, and publish dan talissue of the Merchant, which as the reference in the future, or the line made in the wine industry it in . days. The work has talk a call time to complet sinversigns the part of the engiles we less be reward of by ... his thoughtful consultainformation will be a down to future g a . have been lost but for a self-sacrifice. His co-L.1 fornia vinevards will hardly fail to arra ciate this latest instance of Mr. Haraszthy's devotion to the interests of the industry, which he has at all times been so ready to further and protect.

The Citrograph has the drop on some of the northern editors, and the needless way it revels in the opportunity for an all normal kick is amusing. For the occusion, the climatalogy of Riverside, in controlistingtion with every other spot available for argument on the fee of the globs, the latest mothern dieal problem in so miningting an orangey that one skeleton plant will not depart its neighbor of the goaring southern sun, and the sundry abus said the wine-lubbing barbarian, ourside the publish this moral little t inputance community. are permitted to smould r, while the editor rial in expends its fullest three on the "sapient agricultural editor of some city paper who don't know the diff rince betwo in a pair of pruning-shears and a threshing machine." The editor of our estermed contemporary, the Limit is responsible for this blizzard of South in invective, in which kidney protectors, saglaush ten and codfish balls - a combin iti u suggestive of a hungry mind are indiscrimmately mixed with seedless oranges and fatwitted city editors. He has been guilty of disseminating information on the latest im provement in the production of scedless

This item found its way originally into the columns of the Eastern papers as a joke perpetrated by an importer who was asked the question, "what is a so dless raisin?" His reply was, "at is grown by arresting one of the laws of nature, This formed the basis of the narrative, which has been gradually enlarged upon in its passage westward, a Nevada e iter taking the honors as Anamas, by the following

The seedless raisin is produced by simply arresting one of the process s of nature. When the grape is about one half ripe the end of the vine is lant down and buried in the ground. This prevents the formation of seed and the full development of the fruit, but it ripens all the same and has a delicions flavor. We remember to have heard many years ago of a similar experiment on the apple-tree. It was discovered by an Ohio farmer that the apple-tree migh be made to bear fruit containing neither seeds nor cores and without blossoming. It was done by blo ding down a young apple tree and burying its top until it took root. The tree was then cut off at the natural root and tied up to a stake, when it put forth branch s, which bore fruit of the kind mentioned. In this way it would probably be possible to produce charries, plums and apricots without stones "

This dose is heavier than that which has already disturbed the equanimity of our Riverside savant, and a scoreher may be expected which will teach the scribe, back of the Sierras, that joking will not be tolerated on such a serious topic as arresting the laws of nature-where the raisin is concerned at any-rate. Riverside still exists.

BONFORT'S CIRCULAR contains the following latest reports from foreign vineyards: The abnormally low temperature has kept vegetation in the French wine regions in an exceptionally backward state It is true this very lateness does nway with apprehensions of damaging night frosts later on, yet it causes some uncasiness, and goes to explain the obstinney with which proprietors cling to comparatively high prices with their holdings, despite their desire to convert them into eash,

In Bordeaux the pruning of the vines has been satisfactory, and this is one of the most important conditions, without which the gallant Colonel.

the hopes for a good vintage at the end of the venr would be unfounded. The labor in the vineyards has been retarded so far, but at present the fine weather enables us to work them actively and to make up for the lost time as much as possible,

The pruning, tying and bending of the vines in Germany, has now been finished, but we stand in need of more projections weather if we want their development to make any headway. Meanwhile, desirnetive smalls make their appearance in a few localities, despite the long, severe winter The wood has wintered well, however,

Although in portions of Southern Italy field labor has not been carried through under as favorable conditions as in former Springs, the general outlook in the Italian viticultural regions may be called a normal one at this writing, and everything promises a good yield, provided the temperaturremains as high as it is at present.

A normal temperature new reigns in th Spanish Peninsula which cannot fail t prove propitious to the vines; the budding is now progressing and a favorable circuit. stances, and we are fast approaching the time when night frosts need not be force any more, the outlook is full of promise,

In the upper Alsace the vines are alout ten days whead of those on the lemks of the Rhine, as per reports dated May Ch. and at that date appearances were all for

THE FOLLY of drinking water when purwine can be obtained at comparatively less cost, when doctors bills and funcial expenses are taken into account is exemplified in evity day life. On case is no sooner disposed of than another is reported in some other quarter of the earth. The bit est is that of a woman in England, who had been ill for some months, and the doctors failed to cure her. She asserted that she felt something alive in her throat which almost choked her, and finally a doctor succeeded in extracting a "four-legg d reptile" three and a half inches long, from th throat. The phenomenon was accounted for by the fact that the patient had drank impure water. No wonder Timothy was advised to take a little wine. The next probable source of furth r light on the evils of water drinking may be expected from Riverside, where peripatetic pillars of alkali, or the necessity for surgical relief from sixteen-toed alligators, can not be regarded as phenomenal impossibilities of the future.

DURING THE COMING A vid Manheim, form Ben . and banker of Engl., N years connected with a of Forbes Brothers in the for a tour through the anon business for the wid Harrison & Co. (success 1 1 Harrison), with whom he .. as traveling salesman. 4... suce of the Colenel, comextensive mercantile (xp 1) 1 . . . v him to do full justice to his part meet the requirements of his many in adthroughout the State, from whom he will undoubtedly receive a hearty with on-

Before his return, it is more than probtrip to the Eastern States and perhaps to Europe, where the Red Cross brands of the firm in California wines and olive oil are rapidly establishing a well-merited a quitation. The Red Cross banner will be always at the front with such a standard-bearer as

THE STATE BOARD of Viticultural Commissioners has compiled a directory of the grape growers and wine makers of California. The number of vireyards in each county is as follows:

Alameda, 259; Amador, 25; Butte, 42; Calaveras, 58; Contra Costa, 249; Eldorado, 98; Fresno, 432; Kern, 8; Lake, 47; Los Angeles, 741; Marin, 31; Merced, 15; Mendocino, 6; Monterey, 13; Napa, 508; Placer, 96; Plumas, 7; Sacramento, 128; San Ben'to, 2; San Bernardino, 318; San Di go, 210; San Francisco, 75, (there are no vineyards in San Francisco of course, but many prominent viticulturists of Santa Clara county receive their mail in that city); San Joaquin 124; San Luis Obispo, 73; San Mateo, 24; Santa Barbara, 67; Santa Chia, 471; Santa Juz. 145; Shasta, 77; Solano, 158; Sonoma 618; Stanislaus, 10; Sutter, 40; Tehama, 28; Tulare, 10, Tuolumne, 28; Ventura, 24; Yolo, 126; Yula, 22. Total of wine making enterprises in 39 counties, 1957. Chriteric counties are not a ported as in ny manner not a sted in grap culture.

The Board will in the inture ascertain or public information, the exact nersage in ines, varieties of grapes planted, and ther statistics of value to the viticulturist.

three eriters he in favor ith the people of the S. Th attensou now given the value to in every spect is such as to construct describing that no or-sing fancy has t ken h 'I of the enthushastic seckers after know' it on the sub-rct. Business is intended; and olive orchards will be imm-chate'y sit cut, in different sections of the Santa The great objection heretofore und d of the long orriod of time required to bring the trees into bearing, appear groundles in fact of the fact that in the s ath rn lection of the State, trees which up less than five years old, are now laden with front. In other portions of the Stat , a list is being made of the suitability of climate and soil, for the culture of the true, and in some lices hot-houses are elected. If, rooting slips in large quant to s.

From all parts the State, news from the viney alls is ... ly satisfic tory, with a prospect of a spin 11 for que which there is every a ason to have and command a good price. In a m dissiets of northern California, wine mak 1- are off ring to ong ge good graps at \$25 per ton. In other columns of this issue of the Mer-CHANT, much valuable information gleaned from the most reliable sou ces, will be found regarding the condition of the indusry in the different counties,

From the southern districts the prosprots are very flattering, and the vines are attricting more attention than they were last year for various reasons. The rainfall has been abundant, giving good strong canes with vigorous bloom, and already the vines are forming the branch's of fruit.

THE SANTA ROSA and Contains Rollroad is now open for traffic, Lascan e ing the two fertile valleys of S in una and Nique, and opening up the fillest vive growing and sections of California. Among the fourteen intermediate stations established along the able that Colonel Manhoim will extend his line are those of Glen E. e., Warfield and Drummond, names in the love, ses intimately connected with v. ic ..: re. om to the new road will be of great wineyardists of these valleys: hey win now be able to ship directly is Sachan into for transportation East, instead of first forwarding to this city, as has been necessary

OF INTEREST TO SUBSCRIBERS.

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Erite in Merchant -While that desiring grand right parts of Losses to para lamp remaths heper of these in- granting paragraphs so telligent plant is who take ally mage at stay their pair. Line the privilege pature grants (out rms to saits, cultivate sixe ssfa by the note. And tree, on the other hand, the tree insolves the fall of the value of the frait of that tree in the future, whom in hi from or theirs will enter intline with our rolling of profiting the lines, should be he used for greater safety Had the Sath in Har poins at 1 the prothe of the Levant, wheter the sants years has sell as a first or her, had the oil of the send of the cattern part indead, it wight to for answer little same purpose. The resemble to the first about the nutrities as in authority ports a dettas ler. The Latituda als from the weather, or he measured out in prother's ds, while knowledge say in to we find that you protest and points. out their every lay notes we be somethal or so each time are not as of are rapered in the model in the common recompered takes rings that have satisfied as its associated when the true of renders of costates. As the time heirs lader their first fish as tasteful as the time to you are of according to the following the same and according to the first as the same as the contract of the first according to the contract of t he cultury strict's months. There are hearth community ust (med in only a unity of the lady non-10 at his on the high determed in one of antirest, the large note Both is a riskly possible in product, who may with relation to talk some assessing copy if from so by for its hard to have be written with an account in assessing to mount an assessing to have no more in the formal from an account in the formal formal formal from a first to the formal formal from an account in payor high principle of a good large formal formal from the formal formal from the formal form erson of someon and and who minds that the inclusion of the material is beautiful at a seways of relation of the property of their material is beautiful at a seways of relation of the property of the material is the following resonant of the property of the material is possible to five the first of the material is possible to form the following the material is possible to form the first of the first of the material is possible to the first of the first of the material is possible to the first of the first of the material is possible to the first of the first action of 5 to 10 percent of the 1 p To 2 Short eastern Short east on, the wastingstate read and the agarlus, particularly as by that time people. There is, mail and lift has a long to the state of the id have barned that young an an including the barned that young an including the barned that young an including the barned with speric matter, yet the present the above where we where the printed by keeping, should not be used. id have barned that young and it would from the countries of the property of t Pavorable spin as that remain adopted agation of a plant, are abound over to stiety, and the original complement is aved after being interpreter and zon times son appears so chang i in its pripr eating that people are led astray. The fractionary times are raise and recommendation of the follows for Aug procan the profess to be leaved from it. even if the probest to 1 ray 1 from it second in the second in the second in the second at the belove that there is until 1 weight the company of trees. Moreover, it often stat direction with some of with at a least care on any slip in any sing little edse treating. We auch to be the earth of the sole treating states to the live treating at the to make the grown parts which can be sole to be stated at a marring the other control of the sole to be stated by careful in the sing oper various for individual seating for the with a sole to be stated by careful in the sing oper various for individual seating for that we plant is to live often use for any time of the sing oper various for individual seating for individual seating for the single plant for a permanent by. There are the single plant for a permanent by the single plant for a pe every little group of trees. Moreover, it ock the varioties we have inherite i-and the Lastern States

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OUR. NATIVE WINE SHIPMENTS BY SEA.

TO NEW YORK,-PER SHIP CCM. T. H. ALLEN, May 22, 1888.

WS	pune cons Wine. barrels Wine barrels Wine barrels Wine package Brandy package Brandy parrels Wine barrels Wine barrels Wine carrels Wine	7,359 1,969 21,676 2,532	\$96 2,9 1,95 9,87 2,67 2,67 9,75 3,86 9,97
S	pune cons Wine. barrels Wine barrels Wine barrels Wine package Brandy package Brandy parrels Wine barrels Wine barrels Wine carrels Wine	1,969 21,676 2,532 1,746 2,388 4,320 9,700 2,150 1,230 1,228	2,9 1,93 9,87 2,61 1,73 3,80 95
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R&J	df-barrels Brandy	103	1
A	Darrels Wine	61.543	21.6
S	parrels Wine	3.711	1.1
B & J	parrels 8 me	2.473	1,1
b. Kohler & Van Bergen, 50 D & Co B Drey fis & Co St H S S St E S Kerner & Frohing 255 G & Co A Greenbaum & Co. 117 D Unitla h & Co 238 Walden & Co 238	pariels Wine	2 151	11
D & Co B Dreyfus & Co SII II S	communication of the second	5,472	9
11 8	barrels Wine		15.9
& F Koh'er & Frohing 25% G & Co A Greenbaum & Co. 113 Unuffla h & Co. 140 Walden & Co. 20 23 23	ackages Brandy	1.239	1.8
G & Co A Greenbaum & Co. 113 J Gundla h & Co. 140 20 Walden & Co. 23	barrels Wine	12,610	5,0
J Gumlia h & Co	barrels Wine	5.235	2.0
Walden & Co	barrels Wine	3,235	2,0
Walden & Co 238	nuncheons Wine	8,078	3.2
	hand W.	11.365	
	parrels Wine	2,400	1,5
V Co C Shilling & Co [34]	beautiful State	16.340	
S La hin n & Co 61t	parreis wine	10'940	6,5
5 Earlin B X Co 038		95 9 10	11.1
1 20	hurels Wine	35,300	14,1:
209	asks Wine		2
Total amount of Wine, 201 c ses and	hurels Wine (1) asks Wine (1) cases Wine (1)		16. 1

TO HONOLULU, PER STEAMER AUSTRALIA, May 22, 1888.

TUM & CO Hallenth d & CO		8280
" 15 cases Whiskey		1.20
10 case Whiskey		70
H J A pul H. riszthy & Co 15 kegs Wine	75	511
11 kegs Wine	110	102
8 cases Wine		28
6 barrels Wine	297	212
W M G J D Sprackels & Bros. 1 keg Wine	5	10
G W M & Co Kohler & Van Bergen. 11 ha'f-barrels Wine	365	365
65 kegs Wine	650	65
6 50 kegs Wine	250	250
35 cases Wine.		170
FAS& Co 4 Martin & Co. 9 casks Wine.	555	375
E H & Co Kohler & Frohling 2 casks Wipe		
3 11-casks Wine		
55 keys Wine	630.	470
'in diamond Cutting Packing Co I kegs Wine	101	37
B & Co Cal Transfer Co 5 cases Brandy		100
& Co G half-barrels Wine		_
20 kers Wine.	26	222
3 in diamond	1.135 /	
" 23 cases Wine	1	1.034
G U M & Co Spruance, Stanley & Co 60 cases Whiskey		182
		370
L & Co " 15 cases Whiskey		124
Total amount of Wine, 66 cases and	4.390	\$1,035
Total amount of Whiskey, 180 cases and	4,0.101	1,346
Total amount of Brandy, 5 cases and		100
		100

PER P. M. S. S. CO'S STEAMER ACAPULCO, MAY 25, 1883

F G	C Seh lling & Co. 1 barrel Wine 41	5 8 45
A V C	150 barrels Wine 7.25:	\$ 2,900
J C	C Carps & Co 25 barre's Wine 1.23;	3 93
M in diamond	Kohler & Frohling 50 barrels Wine 2.51	2,517
F H	Cd Transf r Co 16 barrels Wine	1 500
F A P	Stetson & Adams 50 barrels Wine 2.030	1 812
С D К	Lachman & Jacobi 10 34 puncheons Wine 1,070	315
Bindamond	S Lachman & Co 20 barrels Winz	5 40.2
J P	Trapolii, B. rges & Co 23 barrels Wine 1, 90	5 409
"	2 tarrels Brands	2 167
J D W S & Co	Williams, Dimond & Co 16 puncheons Wine 2,500	
1 W L	" 26 cases Wine	150
B D & Co	B D cyfus & Co 100 barre's Wme 4.890	1,600
**		1 8081
-	_ _	
Total amount of Wine,	26 cases and	
Total amount of Bran b	9:	2 167

TO CENTRAL AMERICA.

E E & Co, Puntas Arenas Parrott & Co 2 hab- arrefs Whiskey	52.	8226
J S, San Jose de Quatem B Dreyfus & Co 12 cases Wine		. (1)
P B in half diamond, " 18 cases Wine	-	55
N M & Ca, Puntas Arenas John T Wright kegs Wine	80	50
J H P, Acajutla Urruela & Urnoste 6 cases Wine	1	.15
S T, Aesjutla	15	11
Total amount of Wine, 36 cases and	95 52	\$213 226

TO IRELAND.

D & B, Dublin	'U Shilling & Co 2 barrels Wine .	 875

MISCELLANEOUS SHIPMENTS.

DESTINATION.	VESSEI	R10	GALLONS	VALUE,
	Cmatilla		50 158 791	\$23 13- 340
Total			999	\$49

Grand totals

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VINEYARDS



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LIQUID ALBUMENS,

Bog to call the attention of Wine Growers and Wine Merchants to the following articles, the superior merit of which has been confirmed by Silver Medals, the highest awards given at the International Exhibition of Paris 1878, Bordeaux 1882, and Amsterdam 1883, yes.



LIQUID ALBUMEN FOR RED WINES,

Zinfandel, Chiret, Burgondy and Port.

LIQUID ALBUMENS FOR WHITE WINES, Riesling, Gutedel, Sauternes, Sherry and Madeira, also for distilled



liquors; Whiskey, Gin, etc., etc., WINE PRESERVER,

For Preserving the Brilliancy, and for Neutralizing excesive acidity of White Wines only.



\$126,961

WINE CORRECTOR,

For Correcting the Roughness of Young Wines.

WINE RESTORER.

For Restoring Badly Made or Badly Treated, Harsh and Acid Wines.

ording to directions will prove the Superior Qualities of these Finings

CHARLES MEINECKE & CO., Sole Agents, 314 SACRAMENTO STREET, SAN FRANCISCO.

CALIFORNIA WINE INDISTRY.

From the Grover and County Merchant, we ather the following facts relative to that high we believe is destined to be Califor. ia's leading industry: The win industry f this State promises large developments, wing to the adaptability of several sections the State to the growing of wine grapes. he first wine grape vine was propagated s the Franciscan Friars, who founded the ission of San Diego in 1769. It is claim-I that the vine came originally from exico, and owing to its sneedssful cultivaon was propagated at all the Missions, and nce came the name of Mission grapes. his variety was the only one cultivated up the time Col Haraszthy and the lathas, Kohler went into the industry. They ported vines from European wine disicts, the first being Zinfandel. The sucssful introduction and cultivation of them tract d attention to the adaptability of e State for the production of clarets. The erman vineyardists adhered to the Rhinricti's of vines, which have brought Calirnia white wine so favorably before the orld. Other pioneer vineyardists propated many varieties of German and French nes. The number of acres in this State t out in vines is placed at 230,000. This gregate, however, is not entirely of mare vineyards. Of this number 140,000 e in five years and upward vines--it takes ree years for vines to reach their producre state. Of the vines about sixty per nt are wine grapes. It is roughly stated at there are a little over four thousand neyards in the State, which are being ded to each year.

The vintage of the last ten years have en as follows:

	76	١.															3,759,000
	77																
																	-5,009,000
																	- 5,000,000
																	-8,500,000
																	-1,000,000
i	8.	١.					,		4			,			,		10,000,000
ı	83	3.						,							,		-8,500,000
																	15,000,000
ŀ	8.	i,															- 9,000,000
Ł	86	١.															15,000,000

This years production is variously estiated at from 15,000 000 to 20,000,000 galas. Had the vines escaped the climatic anges in the forepart of the fruitage sea n, the yield would undoubtaldy have gone high as 30,000,000 gallons. It is not at unlikely that the introduction of connsing must machines will and very mateally in increasing the output as wine, by em many thousand tons of grapes can be cured that go to waste owing to wine anufacturers not being able to care for hit during the heaviest picking,

A well-known authority on California ne wrote about two years ago that it onld be scarcely possible to speak of all e different varieties of grapes by name at are used in the manufacture of the rious products. There are over 250 varis of vines now being grown in the difcent parts of the State, while there are no ver than 300 varieties in Crabb's experintal patch at Oakville, in Napa county. nerally it may be said that for the best ades will be the same as those grown ar Bordeaux, Burgundy, Hungary, the rth of Spain, and the south of France. r our white wines the selection will be ise that have made such a name for the Rhine, Sauterne and Spanish districts. e port wines, with modifications of the sek Burgundy and Trousseau, will be ose of Portugal. For brandy the grape encipally cultivated will be those of the reduced in the proportion of 51/4 to 1, the

Cognac varieties, especially the Folle-Blanche and Columbara. In fact, so admirably provided is California with every variety of climate that it contains within its borders the same climatic characteristics which obtain in France, Italy, Spain, Germeny and Hungary.

THE NEW TAX ON BOTTLED WINES.

fn an article in the Economiste Français, on the subject of this tax, M. Lalande says -"This measure has been greatly resented in France, not only because it seriously injures all the wine interests, both from the . commercial and agricultural point of view but above all because it appears to have been directed especially against France I ven admitting that the English Government did not intend to treat French products more harshly than similar products of other countries, the fact remains none the less that it has done so. This is evident from the consumption of the wine of differens countries in England in 1887, which was at

trance (Ec. ! Wine White Wine	Hogsheads, 19,200 7,700
Portugue	15,000 15,000 5,000
	 67,500

Now the wines of Portugal and Spain are hardly ever import d to England in bottles, they come in casks; therefore the new tax does not affect them. Among wines imported from countries other than France, Spain and Portugal, a small quantity only coming from Germany will have to bear the charge. But it is easy to see how French wines will be particularly and gravely affeeted. Our exportations to Eugland during recent years have been approximately as

Wmes in cask,	Hertolitres equal 30 gals
From the Gironde	
Other parts of France	25,000
Wines in bott e.	
From the Gironde	. 40,000
Other parts of France	
Total	

That is to say, the wine exported in bottles, amounts to about two-fifths of the whole, and represents 16,000,000 bottles, which will have to pay about 7d. a bottle, or £180 000, in duties,

"The English Government can, and will certainly, answer that it is a general measme taken against the wines of all countries, and not against French wines in particular. In appearance, this is so. In reality, it is not! It is just as if France were to pass a law to-morrow to tax all woollen imports with a duty of 20f, per 100 kilogrammes This import would be in appearance of a g neral character, but in reality it would only affect two countries - England chiefly, and Belgium. As a fact, besides our importitions from the wool-growing countries themselves, we receive annually from England about 4.2 800,000, worth of Australian wool, about £1,200,000 from Belgium, and hardly anything from other countries. We are not proposing a measure of reprisals here, but merely give an example of a measure analogous to that which England has just taken, which, while appearing to be directed against the products of all countries, in reality affect only those of

*Before 1860, French wines paid a duty in England of 5s, 6d, per gallon. Since then they have only paid 1s, per gallon. The result of the reduced duty has been that the consumption of Prench wines has merensed from about 3,000 to 30,000 hogsheads. That is to say, the fax having been of 1 to 20, and, with the duty so largely reduced, the English Treasury has received about double what it did before. To-day the situation changes. The duties on bottled wires are more than tripled. It is the first step that England has taken in the abandonment of that wise and fruitful political economy which has raised the and France is the first victim of this reactionary policy."

PHILOSOPHY OF STRANGULATION

The New York State Commission which reported in favor of the substitution of death by electricity instead of hanging in the case of criminals condemned to death is not having its own way without opposition. The well-known Dr. Hammon lately criticized the report at a meeting of the Society of Medical Jurisprud nee with the vigor characteristic of the man.

He says that death by electricity would obviate none of the objections to the present system. We have no means of knowing what degree of pain might not be inflicted, and it would be difficult to insure death in every instance. If the electric shock mere ly stunned the convict without killing him, he would come to life afterwards and the whole job would have to be done over again. The scene would as now, be one of sheer brutality, calculated to shock the sensibilities of bystanders.

He recommends hanging as the most effective and humans method of inflicting capital punishment. But he objects to the present system, He would have the culprit seated in a chair in a room in the jull and securely bound with his face covered. Round his neck one end of a rope should be scientifically adjusted, the other end should be run through an ordinary pulicy fastened overhead. At a signal the rope should be hoisted to a height that would lift the culprit's feet above the floor, and he would there be left to strangle. The ment of this plan, according to the doctor, is that it is painless. Strangling, it seems, involves no suffering. A man who dies by strangula-

consumption has increased in the proportion | sees bright objects dance before his eyes, hears sounds either musical or roaring, feels his feet unusally heavy and then rebipses into insensibility. The doctor decharts that no point in the operation does the patient suffer pain.

We give Dr. Hammond's views for what path of economic reaction, in the partial they may be worth. Public opinion has protty well settled down in favor of capital punishment in certain aggravated cases of prosperity of England to so great a height, crime. The opponents of that punishment, who once constituted a political party are now a mere handful of doctrinaries. H we are to kill criminals, it is due to our civilization that we do so with the least possible burbarism in our methods. Home the debute between the doctor and the Legislative Committee is not devoid of interest -- Ex.

V RAISIN GRAPE

The raisin industry of California promises to become very important and fairly remunerative. The climate of the central and southern part of the State is most favorable for drying the fruit, and there is the center of this enterprise, says a writer in Vick's Magazine for May. The two important factors in raism making are a suitable variety of grape, and a dry climate--one not subject to dews, fogs or rains for weeks while the fruit is drying. Though the region of California mentioned is not exempt from fogs and raius, yet they are infrequent and the necessity of protection to the drying fruit is not experienced often enough to make that feature of the work very burdensome. The variety of grape from which the raisins are made is the Muscuts of Alexandria, which is better known to most of our readers as the Malaga grape of the shops, which comes to us from Spain, packed in cork dust, in small casks, A white grape makes a raisin of better color than a red or dark one, though in Europe both red and black varieties are used to some extent. In Santa Chara County, where temperature at drying scason is not so high, nor the air so dry as more southern countries, the grape growers have resorted and evaporators, and with success, and the practice is extending; many tons of raisins were made there, in that manner last year. The method is expose to the sum for a tew days, and then no suffering. A man who dies by strangular remove to the evaperator and finish up tion first feels great heat in the head, then with a slow heat,

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Sole Agents Pacific Coast.

Royal Baking Powder.

Kingsford's Oswego Starch, Walter Baker & Co's Chocolates and Cocoa, John Dwight & Co's Soda.

We will offer a full line of other Grocers' articles shortly.

LABOR FOR VINEYARDS.

The question of laborers for our vincyards has been one which has received the attention of our Viticultural S er tv. and numerous ways and experiences have be to related by the members. Some find on the Chinese good and off circ help; eilerlook to white labor, French and I' but a others look to colored labor, though a dogreat extent

A. P. Butler, the great raisin men of from the Southern States, and compthem in his vineyards.

We take the following from the Tresno Democrat which will give an idea how the plan succeeds in that section,

"Ale they satisfactory?"

"Very, indeed. In fact, I am so antch pleased that I intend to give an order for an extra lot to harvest the graquet quar

. How do you find this labor as compar d to Chinese?

"I greatly prefer it. The colored people work more cheerfully and are pl able to do more of it than the far as I have tri d them they per cent more work at a m Another strong argument to darky is that he is always will. . . to and unlike the Chinamon, h stand the English language, was a 1-4 a consideration when you have a b many about you."

"I see you have a good bring won a on your plantation. What do to y fo?"

"They work in the field also_site of their husbands and children insteas they have always done in the South 1

"Can they do as much work with a ho as a man?"

"Working with the boe is comporated by light, and the women seem to keep up at the the men without any extra effort. In picking grapes and handling fruit the women will surpass the men, just us they do in the cotton fields-and then, too, they will have a salutary influence on the chudren who work with them "

"Are the darkies only risers, or do you have trouble in getting them out in the morning?"

"I don't have the slightest trouble. They rise earlier than Chinamon, and are not only kind and sympathetic, but conform cheerfully to all my rules."

"From what part of the South d.1 you get your help?"

"They are from near 11 cleary N C They are all farm hands- acus of them have lived in large cities-which is greatly in their favor. Those who live about the cities are usually untit for reliable wo k.

"You state that you are satisfied with them. Now, how is it with the n : Have you heard them express them exon this point?"

"They have nearly all taken occas on to express themselves as delight d with their surroundings. Many of them have were n to their triends to come to Call tria as soon as they can raise the money.

"Are their any skilled in chase a corety them?"

"Yes. In my crowd there is a first rat blacksmith, a carpenter and an engineer however, when not plying their regular vocations, they don't he situte to personn field labor.

"How about the morals of these picts Do they have any specific religious inclinations?"

them use an oath since they have been with me. As to their religious producetions, they are particularly anx. is to a idan of worship, and I have promised to lould them a nice charch in the town of Butler in a short time. They all have boths and prayer books and spend the or and port of each Sanday singing hymns. Unch Jack Philips, the old st man in the not think the latter has been tried to any lot, about fifty years, is looked upon as their leading min and adviser. Unch Jack is henest and intelligent, and scenis Fresno, has imported several collision in to take special pride in having the young tellows deport themselves well, Another unflocuted man among them is William Budges, a minister, who has a very corpet idea of what is right and is a very refindle man "

SACCHARINE.

The employment of this article in medicine is steadily increasing. The following condensation from an article in the Journal des Fabricants de Sucre, shows the attention now being given the subject by French (drysicians)

Certain : hysicians have asserted that the use of a dose of one-tenth of a grain daily by diabetic patients produced no inconvenience, but the contrary was asserted by others, and the question remained unsettled. Dr. Worms, who read a paper before the Académie, found that in the case of four diabetic persons, to whom he administered the above dose, only one feit no inconvenience during a period of two months, the other three suffered from disorder of the digestion, which compelled them to give it up after a forthnight's trial, and one of them, on attempting to recommence the use of the saccharine, again experienced the same symptoms. The first desideratum being to keep up the digestive powers, it would have been very imprudent to contimue the use of the saccharine, which would thus appear to be likely to produce builtiffects, if its use should become genral, M. Dajardin-Beaumetz agreed with Dr. Worms that the facts, which he had not remarked himself, but which none the less exist, however they may be explained, constitute a question of some gravity, and that, whether considered from the point of pub lie health, or of the Treasury, or in connec tion with the national industry of sugar manufacture, the attention of the authorities should be drawn to it. Dr. Worms inolines to think that saccharine is indigestible and disturbing to the digestion. Sugar is a food, saccharine is not. It is the confectioners who are the most interested in this product which would enable them to do away with sugar in their manufactures. as they have already dispensed with fruits It would not be the least marvellous among the food adulterations of the age if we were to have preserves and similar articles which contained neither sugar nor finit. On the eastern side of France a compound is said to be now sold under the name of Sucre de-Cologne at 25 centimes (31 cts) the pound, the nature of which appears doubtful, but which has great sweetening power, and is of a yellowish color.

OPIUM CULATVATION IN PERSIA.

Optum occupies the first place in the foreign trade of Persia, says the Chemist and Druggist. It insures the largest and most direct eash return to the producer, and, as a natural consequence, the area under cultivation is increasing rapidly. The two "They seem to be as moral as any set of principal markets are Hong Kong and Lon- duty, and he shall not be liable to pay or

were exported from the ports in the Persian Gulf, exclusive of what was sent away by land routes or was consumed in the country itself. The quantity of morphia contained in Persiph opium is H12 to 12 per cent, while in other opium producing countries it rarely exceeds 912 per cent. Papaver somniferum, or white poppy, of which opium is the inspissated julee, is grown principally in and about Ispahan, Yezdand Shiraz, that of Ispahan being superior both in quality and quantity. The preparation of the land begins about Sendember 5, and consists in plowing, harrowing, fertilizing abundantly with ashes and detritus, and laying off into squares to facilitate irrigation. After sowing, the fields are irrigated three times, at intervals of fifteen days. After that there is only one more irrigationabout the middle of the winter. In the spring, irrigation takes place on March 20, after which the land is repeatedly harrowed and hold in order to extirpate all parasitic words. The plants are thinned, and then watered every ten days until flowering begins, when all work must cease. When the heads have formed and have fully ripened. a last flooding is given. Then six slight ineisions are made at about the junction of the stem with the head. This should be at noon. The juice that exudes is collected the next morning and the morning following at daybreak. When these first incisions have ceased discharging, others are made low, r down, and the operation may be thus thrice repeated, the opium obtained after each successive incision being proportionately inferior quality. Next, the plants themselves are cut down and the heads sold, the natives using the seed on bread as a substitute for butter. The end of May is the season for harvesting.

AN ADDITIONAL DUTY ON WINES.

The new additional daty imposed on all wines imported in bottles into the United Kingdom is called (for technical reas as of no interest to our read rs) a tax, or surst ix. The main point is that it is 5s, a do z is and is levied by the Customs authorities as tol-

			Tot Inity	Tot Chig
	Duty	Tax	pand Tax.	per tealle
Magaunisdoz	4-0	7.6	11 ti	2.10%
Imp. Quartz "	3.0	5-0	5.0	~
Botties . "	2-0	5.0	7.49	13-13
Inno, Prots	1.6	2-6		2.3
Half Bott es "	1.0	2.13	13-69	33.6
Units Bot's 0	tt d	2.6	,; ct	(i-O)

It went into effect immedia and the English Law provides - Co. no L. 18 Consolidation Act, 39 and 40 Ve stir, cap. 36 sec. 20:

eIn the advent of any iner a . d at 150 or repeal of duties or Customs chaupon any goods or commodar s after the making of any contract or agreement for the sale or delivery of such goods duty paid, it shall be lawful for the siler, in case such increase shall accrue betone the clearance and delivery from the warehous of such goods at such increased duty, and after payment thereof, to add so much money to the contract price as will be equivalent to such increase of duty, and he shall be entitled to be paid and to see for and recover the same; and it shall be lawful for the purchaser under any such contract or agreement, in case such decrease or repeal shall take effect before the clearance and delivery from the warehouse at such decreased duty, or free of duty, as the case may be, to deduct so much money from the contract price as will be equivalent to such decrease of duty or repealed

people 1 ever saw. I have never heard don. In 1886, 4,993 chests, worth 374,477t, be sued for, or in respect of such deduc-

So that no serious inconvenience was

At a general meeting of the wine and spirit trade of London, called to consider the subject, the following resolution was adopted: "The wine and spirit trade approve of the surfax on bottled wines, and would glally see the principle extend d to foreign spirits imported in bottle,9

An Average Vineyard.

Webster Treat of the Oak Shade orchard enitivates about fifty acres of Muscatel raisin grapes. The vines are now about ten years old. In 1886, this vineyard yielded 70,000 pounds of crude raisins. This year. he packed 10,000 pounds from the same vines. If packed his entire 1887 crop loose and realized about \$140 per box therefore Mr. Treat estimates that the cultivating a mature raisin vineyard, per acre, including picking, curing, packing, and marketing his crop, at about \$10. Of course this estimate is subject to contingencies, but is as close to the fact as a general statement may be. Basing a calculation upon this statement then, we arrive in conclusion that Mr Treat charges up about \$500 capenses against the vineyard per year. Taking the two last years together, the total yield was 110,000 pounds, or 5,500 baxes. Supposing he averaged \$1.10 per box, the gross returns for the two years from this fifty-acre vineyard were \$7,700. D ducting \$1,000 expenses for two years and there remains \$6,700 net profit, au average net profit of \$3,350 per year, or \$67 clear gain per acre. These are not boum figures concocted for the purpose of deceiving the gradulous tenderfoot. We believe this representation is a fair and honest showing of what there is of fruit culture in and around Davisville. When it comes down to sober fact, no locality in the State can justly boast of a better average, Of cours, we could cite instances of as high as \$100 to \$200 clear profit per acre, from fract ent are around Davisville, but it is not m cessary to dilate on these instances to prove the capacity and adaptability of our soil for fruit culture. It is true that a mature fifty-acre Davisville vineyard can be run for \$500 per year, and that the gross proceeds therefrom will approximats \$3,350, leaving a net profit of \$2,850, that ought to satisfy anybody who doesn't want the earth, with a barbed wire fence around it,-Davisville Sugnal.

GREAT WORMS ON THE VINES

The vineyards in the upper part of Napa valley are said to be suffering considerably from great striped or spotted caterpillars. They are larvae of two species of Sphinz motus or humming-bird moths. The moths are seen hovering about the flowers in the evening and are particularly partial to verbenas. These worms have done much harm in other years in our vine districts. Around Woodland and Fresno they were very abundant many years ago. There are two ways at least of fighting this pest. The moths may be stricken down and killed in large numbers in the garden and thus future hatches of worms prevented. The hest way to treat the worms on the vines is to spray with Paris green-one pound to 150 gallons of water. This is death to all leaf-eating vermin.

The MERCHANT is the only recognized wine journal on the Pacific Coast.

TEATERS IN NO

There France. 39, 1 Client Ve to all in rings com the t ng to Fint. .

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Bord any 5 Prople and B atmost to fi things by av new mark is Their sac sine a

small territory of Si held for the wine trad but the cant as compared to the enof its neighbor. In 1887. It... have produced nearly 700 mistons of wine, or more than Fig. goodly quantity, and the twenty has annually imported into Switzerland would only be a short relief. Outside for its brade the only outlets of any magnitude South America, which us about 18 i lions of gallous from differents or social England,

It may ensily be inferred that if I are closes her doors to Italian water, she is a tainly will not have any too xport or linesthe trade of South America and of L. L. and will naturally fall to those who takes wine at low st figures, le it Spain a free It thus follows that while a partective to di may benefit the French van-gr was I: will be at the expense of the French consumers, and that Italy will be compeled to bid for every available trule in orl i t dispose of her enquious surport of wire How, therefor, such a state of this 2s could benefit us, as some assert, it we is a be difficult to imagine. We estimally este not compete with Italy in the rook see the world that are equally open to her, and we certainly cannot explor France to dis-criminate in our ray anguine herself

But, why should we think of the mark to, while our own home mark the yet almost und relosed? The prestract of American people may require diff read methods of personsion, but while right is on our side, we should haddly uphold the doctrine of true temperature, that tea his all men to use properly of the blessings which Providence has bestowed upon them. The results of fanatical probibition are already well known, and the un word able reaction to has set in. Let each one be taught new , and when to use wine as a beverage, and a market is found for twenty times our present yield of wine. L. D. Cevini.

Subscribe for the MERCHANT.

DISTORY OF A RAISIN GRAPE

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and the last of the last of the first of less of size of the size of the last of the size itar compositions and had see $(\mathcal{A}_{-},\mathcal{A}_{-},\mathcal{A}_{-}) \subseteq (\mathcal{A}_{-},\mathcal{A}_{-},\mathcal{A}_{-}) = (\mathcal{A}_{-},\mathcal{A}_{-})$ and to your of your trainer. mary 1st it was planted two

1 . 1 . 1. 1 5 $\begin{array}{ll} x_{11} & x_{12} & x_{13} \\ x_{13} & \Delta t_{13} x_{13} x_{13} & x_{13} \end{array}$ 1: 721.6 - 4 e Tables Santagan

System rank process figure of them the time and had upon the crops and labor at reas inground to dry

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1-1-11-11-11-11 to through it is the $e^{-\frac{1}{2}(-\frac{1}{2})} \leq e^{-\frac{1}{2}(-\frac{1}{2})} \leq e^{-\frac{1}{2}(-\frac{1}{2})} \leq e^{-\frac{1}{2}}$

BOGLS WINES

The an of Ad to NAY LA co-bond ching into the carte of could ware house and that's that another extensions tre. Id botto lusiness dipends ao a steri tires on the manufactural wine trades, and says to cauget a pretty good adjacet, toextent of one by the size of the other. It som thang like 10 000 bottles are filled with polesers dren, from a great authority, it may strongs and spurious compounds and is not at for pure imported wine in New York producing and wine drinking countries, is v ry work. But this is the case, nevertheiess. The thing is susceptible of proof who z you see bottles labeled "Bordeaux, "Medge" lying side by side in the same bin and you know they will all go to the sain schar and come back full, each with a lifferent label on it. Foreign labels are easily come by in Now York.

A dealer in old bottles talked confibrawith, he said ... Here is a bottle for zation of the age in which we live. which we got 15 cents. It is made rough and duty so that it will look as though it were covered with dirt and had just been fished out of some old 1808 bin. This bottions an important thing to gentlemen who are an agged in this particular kind of swinthe, because it enables them to put on the markets could diwine that sollist at \$1.50 a body and ists is conts a lettle to make Wilson at our bottles by the honore t I zen, to bug houses that are putting up to smaller amounts and the conthatis will and retain. is a curious fact. I have a softh its of pure American was much about the snape of their ere satisfied to pur win and is suited in Lebeau, but inch wh. shapes that have been recognized by leng at a sted molive culture in this valley. east on for each kind."

The entire plant of the U.L.s. (c.) Company has been so for syncial composer of $\langle H\rangle$. Sauth Isador Jacks (c.) 548 0 (c. The grades symbolic are all were kn to see the north Sanchers. the leasuress in good s

GRAPI TERTITIZES

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- 11.-

WINE AS A BLACKAGE

In a ax I. Osvald, in Popular Science Mosthly says of It is, indeed, a remarkable constitute that in the home of the best while at dos, in Grove and Southern Spain. dramsoness is far less prevalent than in S othered or in Russia and Poland, where Bacchers can tempt his votaries only with would surprise most persons to know that mains are volka." To this very significant be added that intemparance, in all grape for less than in the non-grape producing, and runs, whisky and gin-drinky in conntimes. Therefore, all rational temperance 'st. Julien," " Chateau Margaux " and men, like those of France and Garmany, should advocate wine as a beverage, to the exclusion of distilled alcholic liquors; and, ake them, whenever it may be necessary, pledge the people against their uses in social life, as prone to lead to appulling abuses, such as now disgrace, in many truly with your reporter, and picking up a nations, including our own, the civili-

THE WEIMORE OLIVE ORCHARD.

Chas. A. Wetmore's olive orchard on his Cresta Blanca " + state is now six years off, and every tree is a perfect mass of blossem-bads. Better evidence of the fruittuiness of the olive in this township cannot b wanted, than is obtained by a visit to this orchard. Here, too, may be found out something regarding the needs of the tree. On fairly good shallow soil, underlaid by kinds of in modiciared wine. They are holds, it does not thrive; neither does it do not only our cast as a but others in the fact on day soil with insufficient drainage; the order p, dry beams, particularly on the Here mass the the tree makes a rank growth, and at the will this s winth year, yield a large crop. sty Shall and large trees are equally well They could with fruit-feids, each in proportion " of to the amount of wood. In a few weeks and the bernes will be set, and this orchard the stuff from drugs will have test and to it should then be visited by every person in

An Olive Fertilizer

The surrespondent of the Wilrograph in s othern Lorge, says that along the Reviews, where olive plantations are numor his, the farmers very commonly fertilize with old wooden rigs. These are purchas if on bales for that purpose and are placed in tren to a dug around the trees,

canneries will operate to their finite aparety ! Subscribe for the S. F. MARCHANT,



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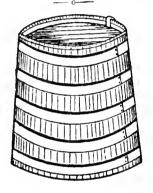
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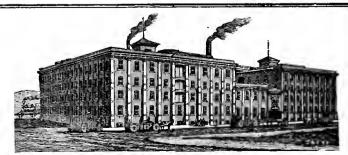
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Nine persons out of every ten, with a einder or any fereign substance in the eywill constantly begin to rub the ye with one hand while hunting for their handkerchief with the other. They may, and sometim s do, remove the off inding on br, but more for pently they rub tol the eye becomes inflamed, band a handke rehad around the head, and go to bed. This is all writing The better way is not to rub the eye with the end r in it at all, but rub the other eye as vigorously as you like

A few years since I was riding on the engine of the fast express, from Buighamton to Corning The engineer, an ell schoolmate of min-, throw open the fr at window, and I caught a cinder that Lave me the most excruenting pain. I b gan to rub the eye with both hands. "Let your eye alone and rul the other eve (this from the engineer.) I thought be was chaffing me and works I the harder of I know you doctors think you know it all but if you will let that eye also and rub the other one the cinder will be cut in two mornt. minutes," persisted the engineer. I began to rub the other eye, and som I feat the einder down near the inner canthus, and made ready to take it out to "Let it alone and keep at the well eye," should it he does tor pro tem. I did so for a minute long), and looking in a small glass he gave in . I found the off nder on my check. Since them I have tried it many times and have advised many others, and I have never known it to fail in one instance unless to was as sharp as a piece of steel, or something that cut into the lad and r qur l an operation to remove . Why it is so I do not know. But that it is so I d know and that one may be saved much suff ring if he will let the injured eye alone and rub the well one .- [M dieal Summary.]

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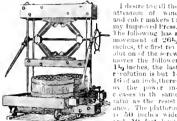
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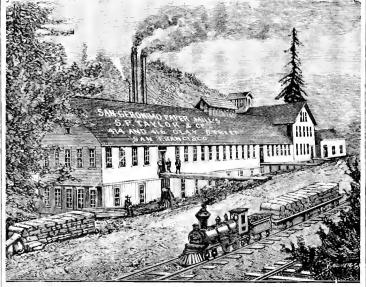
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Ľ	Fig. M. Martine at T. H. for Control	*12.45 P
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	8.30 a Fast Mail for Ogden and East (ForNiles, Sandose, Stockton,)	10.45 A
è	9 00 a Galt, lone, Sermonto,	5.45 р
r	9 30 A Fresno and Los An	12.15 p
ŧ	10 30 4 For Haywards and Niles	2.15 p
•	*12.00 M For Haywards and Niles	* 3.45 P
	* 1.00 r carriers nto River Steamers	* 6.10 A
2	3.00 r (For Haywards, Niles, and t	9.45 A
ı	3,30 p C ntral Atlantic Express (for Ogden and Fast.	12 45 P
-	(For Stockton and sMilton:)	
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	(Knight's Landing via Davis)	
	distribute i	* 8.45 A
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١	press, for Santa Barbara,	
	8.00 p - Los Angeles, Deming, El	8.45 P
Ш	Paso, New Orleans, and East	
	SOUTH PACIFIC COAST RAILWAY DIVIS	ION.
	For Newark, San Jose and)	8 05 P
1	(For Newark, Centerville San)	
	8.15 a Jose, Felton, Boulder	6.20 P
1	* 2.45 P	10,50 A
i	der Creek and Santa Cruz i	
١	4.15 P For Centerville, San Jose, J Almaden and Los Gatos., j	9.20 A
ı	NORTHERN DIVISION (Fourth and Townsend	STREETS.)
1	7.15 A For Menlo Park and Way) Stations.	2.30 P
İ	7.50 Monterey and Santa Cruz	8 35 P
	For San Jose Gillov Tree)	
1	Pinos, Pajaro, Santa Cruz	
ı	S.30 A Monterey, Salmas, San Miguel, Paso Robles and	6.40 P
١		
1	po and principal way sta.	
ı	po and principal way sta. 10,30 A For San Jose, Almaden and Way Stations	4.36 P
ı	12.01 P (For Cemetery Mento Park)	5.42 P
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	For San Jose, Tres Pinos	. 10.00 .
١	3.30 P For San Jose, Tres Pinos Santa Cruz, Monterey & Principal Way Stations	10.02 A
	3.30 P For San Jose, Tres Pinos Santa Cruz, Monterey & principal Way Stations For San Jose and principal	9,03 A
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VOL. XX, NO. 6

SAN FRANCISCO, JUNE 22, 1888.

PRICE 15 CENTS

Report of the President of the State Board of Viticultural Commissioners.

Continued from the S. F. Manimast of Jun. St-

It will be well to state here that we have no easy means of ascertaining how much wine and brainly may have been shipped overland by rail, to be afterwards forwarded rom some Atlantic City to some for ignonitry. It is known however, in a geter-d way, that notable quantities of wine and brainly, have this been sont across the continent and reshipped to Ear que. Neither nave I ready at hand a means of ascertaining the amounts of this products sont by all to our sister republic Mexico, and yet hey must be considerable.

The tables of sea exports of brandles rom our port to foreign countries nature p ally follow those of wine, and though for he present this branch of the wine trade loes not figure up largely in amounts, it is revertheless of considerable interest, and ecently shows very decided and encourage ng gains. As our wines become more slentiful, and when those hal you days for riticulture will acrive, when all the poor rines will be distribed and only the good nes be sold to the trade and the consumer, hen our brandy pro in tion will increase, surplus arise and a large exporting trade. T to e possible. These tables may then be of ome interest and value as a matter of the eference and comparison. For the pressure int, not being of as much consequence as 1573, he wine tables, I have simplified in Leonard 1578. shat curtailed their complistion

alifornia Brandy Experts by Sea to New York and Foreign Countries from San Francieso from 1875 to 1887 facilistic

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otal	646,554	117	\$1,429,240	15

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In glancing over the above tables of brandy sou exports to foreign ports, we cannot but note the small amount that has been taken by foreign countries, a little ver forty-two thousand got instituted at ighty-for the useful defeats, in thirte-in years's time the reason for this is well known to the trade, outside of the relative high piece four brandy even when shipped in bond, that is, by non-payment of the anterms in visit tax it is noty comes per price will to the branchy is six the dear to well compete with the cheap imitation brandles sent to all ports of the wail in case and in bulk by Germany, Irah - and England, and though in deaf grain or corn spirits tres for the mark to is genome tognac. This statement is fully our borated by the reports made by or I's, Consuls in Franciscol Gent of Region these figure as branch which is so at these y used in M xiene Chill a lapan the C nitral and South American States of the Sandwith Isombs, we have likewise the complete i m ste spints f th s = $\sigma_{\rm s}$ = s, s, h as $K \approx \sigma_{\rm t} C \exp G(X_{\rm t})$ r, a M s = n $M(x_{\rm t})$ and the listiflations from the another and Japan, etc., etc.

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The very fat in of the Book shaped in British is far that in 1884 seeks to the expression by the back of at may have been some very 14 Brandy distriction and seeks to the fat from sax to the 200 dispars 1 or

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In the matter of the brandies exported, those shipped to Central America, British Columbia, Mexico, Honolulu, Japan, Panama and South Am-rica, can be reckoned as generally going to the trade. Those to unmentioned countries can be considered as sample lots going partly to the trade and partly to the consumer. That quoted as going to Europe must be taken as merely small sample on trial lots up to 1887 when one Trade for or about 22,246 gallous were shipp d dire t to Germany as a venture. I surmise this lot will, when properly aged in the German warehouses, and deftly fixed and put into Freuch Octave barrels, be returned to our country as a new plus ultra genuine old Cognac brandy, and realize fabulous prices from our ever credulous American dudes.

And it is possible to do this, with certain flavorings as practiced in Europe, and cutting down the natural grape flavor with potatile or grain spirit, and return the brandy thus disfranchised to the United States with duti s paid at less than three dollars and a quarter per gallon. If cleverly done and sold through some well known importer, this brandy could easily be disposed of in the large eastern markets at from eight to ten dollars per gallon if jobbed out in the ordinary course to the trade. The consumer would afterwards most likely pay from twelve to forteen dollars for it That this can be done now, with the proper commercial connections abroad and in our country, and that it will be done in the near future is my sincere belief. It is rather sad however, to think that such methods have to be resorted to to induce the free born American patriot to appreciate the once and filed production of his own country.

And right here, while speaking of th lack of a general appreciation of our products among our American citizens I desir to draw attention to the great injustice donour viticultural industry by the use of foreign white wines, clarets and Champagnes at public banquets given by public institutions

While the figures given in this report very clearly show the growing appreciative acknowledgment of the good qualities of our wines, both in the Atlantic States and foreign countries, I confess with reluctance and some shame, that the average Californian citizen has the weakness and badtaste to allow his ignorance in wine matters to he swayed by his projudice, and inst ad of purchasing wine for the sake of wine, purchases and sets on his table and before his guests, wine chosen on account of its high price, and peculiarly fashionable foreign name. Such questionable taste in display may be excusable in private life, but when extended to public banquets on public oceasions, by assemillages of men supposed to repesent the interests of the State, such as the Chambers of Commerce, the Boards of Trade, the Fourth of July and National Political Committees, it then becomes a comical paradox, a farce beyond consistency, vulgar even to Shoddyism, and I am sorry to acknowledge that such occurrences take place almost every day in this community

In this free country any man has a right to use, eat and drink what he pleases in private, but when representing a public in brandy. It should vigorously oppose any terest in a public place, with the public proposed reduction, for in such reduction money, or money sub-cribed or called from the the easier and most effictive as well as the community or the public, then he has the cheapest means of concocting spurious no right to patronize or show a partiality wines and adulterating those that are pure. And these pruned and cultivated according wine taken at the proper time and in moder-

gallon, and twenty to twenty-two dellars or countenance a competing foreign proper case. This Brandy is usually sold to duct. And I may add that if a consistent public spirit ruled the supposed representative men, political and commercial of this community, as it does those of other communities. Californian wines would have the undisputed post of honor at every public banquet, whether it be that of the Chamber of Commerce or that of the reception of a body of Honorable Veteran Firemen, without murmur and without cavil. Fortunately the present generation is of but a day and it is to be hoped that their specessors will have some public spirit, some local prid ..

Among the most important work that should fall within the scope of this Commission is the endeavor to frame some National Law for the protection of pure wine and the detection and prevention of those that are spurious. While the producers are entitled to this encouragement the consumers, who are much creater in numb-rs, have a right to demand such protection to their purses as well as to their health. All spurious wines, if they are innocent in their action, should be plainly labell d to indicate their nature, and should be taxed. If not harmless, their manufacture and sale should be prohibited. No matter how cheaply we can produce and sell our wines on this Coast, the additional transportation cost to the Atlantic seaboard will always be great enough to permit a profit to the Eastern compounder. Regarding immediate National Legislation for the protection of the purity of our wines. and regulations for their sale, there is much to be said, but I will briefly state that the Commissioners of this board have long ago car fully considered these points, and communicated the results of their deliberations to our Congressmen and Senators, urging them to use all means in their power to secure some effective raw for the protection of pure wines. In response to the urgent and continued appeals of the Commissioners, several bills have been submitted on our behalf by Congressmen McKenna, Morrow, Felton and Thompson, which, if pass.d, will give our industry great immediate relief. In this matter I may add that the several resolutions passed in our board and forwarded to our Representatives at Washington, were adopted some two months afterwards by the Wine Growers' and Wine Makers' Association. As this required legislation will be discussed in the Halls of Congress. 1 will not dwell further upon it, but before dismissing it I would give a timely word of caution to those who ask any reduction either on the tax on distilled spirits or on fruit brandies. I can forsee no greater peril to the advance of wine making in this State than such reductions. The Commissioners, after mature consideration. bringing their practical knowledge to weigh upon the matter in most of its bearings, have wisely concluded that it would be dangerous to our best interests to have the tax on fruit brandy either lessened or removed, except such as may be necessary for the production and preservation of sweet wines, or for wines destined for export to foreign countries only. And it is to be hoped this judgment will prevail. In the meantime, the Commission should continue their endeavors to maintain a high Internal Revenue Tax on distilled spirits of all kinds, whether they be grain or corn spirit, rnm, alcohol, whisky, fruit or grape

With cheap distilled spirits all such imitations and falsifications are not only possible, but likewise profitable. The most effective of all ways to prevent and put a stop to this nefarious business of adulteration is to make it unprofitable. We should have pure wines for our whole Country, cost what it

Next in importance in the work of the Commission, should be the gathering of reliable facts in detail concerning the requirements and demands of the wine markets of the world. Their requirements in regard to quality as well as quantity; the prices obtainable in each great market; the cost and mode of transportation; the terms and methods of payment,

These facts once obtained should be constantly followed up from season to season. showing any changes taking place; should be kept for reference in the Rooms of the Commission free to the inspection of all interested, and should otherwise be published and made known throughout the State, for the benefit of the whole Viticultural Industry, whether individual or collective. Changes often take place in the larger wine markets, which if known and made use of in time, would prove of the greatest assistance in placing considerable amounts of our wines in a profitable manner, and possibly secure us new and con tiunous markets.

Following these important future labors. comes the necessity of establishing experimental vineyards, properly equipped and maintained in every prominent Viticultural centre of the State, for the sole purpose of ascertaining the adaptability of different vines to raise the best grapes, in the greatest abundance, with the least accidents or disease in the different localities. Fresno County should have one, Santa Clara County another, Santa Cruz, Los Angeles, El Dorado, Alameda, Napa, Sonoma and other great wine centres should each have their own experimental vineyards. these should be modelled after one pattern and planted in that kind of soil that is the most extensive in each individual district. Vines planted in these vineyards that previous preliminary local experimentation had indicated as the more valuable in point of quality, avoidance of danger, accidents or disease, and giving the hest monetary returns, yielding a just medium between the high grade and good ordinary wines which have proven the most remunerative in Europe as they will also do here. I look with the greatest solicitude at the efforts made by some of our vine growers who seek only for the highest known quality, regardless of the well-known poor yielding qualities of the vines they plant. It is well enough to experiment in a small way, but to jursue such a course on an extensive scale, is fraught with the greatest danger of failure and ultimate financial ruin. What is needed above all considerations with us is good bearers with good quality, for after all the only means of proving a vinevard successful is its satisfactory financial returns. We had better leave the discoveries of the Californian Lafitte's, the Chambertin's, the Johannisherger's and Tokay's to chance or future generations, and for the present content ourselves in securing abundant yields of real good table wines with satisfactory monied returns

These Experimental Vineyards should consist of not less than five hundred vines each, of such varieties as might be considered the most desirable in each District. to the diff-rent, and most approved methods. Correct records should be kept for each variety, its general b havior under drought or superabandant moisture, great heat or excessive cold, liability to or freedom from disease of whatever nature it may be,

Observations should be made of that most important of all periods, the flowering of the vine whether this occurs at the season the strong Spring and Summer winds blow, or at a time when winds are unknown, and all is favorable to nature's effort. The watching for periods when the frost is most likely to occur, and numerous other similar contingencies. Then should follow close observations of the behavior of the vine during the periods of ripening, the first growth of the bunch, the formation of the seed, the swelling of the berry, the coloration of the grape and the final ripening of the whole bauch. Then should come the testing of the saccharine and the comparison of the ripening periods in the different varieties. Following this would come the relative yield of the different varieties, and last and most important of all the actual market value of each different kind of grape. I would suggest that all the grapes grown on these different Experimental Vineyards should be sold in the general market and thus test their relative monetary value practically for a unmber of years. The income so derived would most likely come near paying the current expenses of each Station, when the vines come into bearing. Owing to possible complications it would be better to dispose of the grapes to the wine makers offering the highest price, than to encumber the station with the wine making, or entering into Laboratory work: rather let the market determine the relative values. These Experimental Vineyards should be under the immediate supervision of the respective Viticultural Commissioners of each District. Of course it is to be supposed that the Governor would appoint practical Viticulturists only, and such as are recognized capable of filling so important a position. Such a plan, if carried out, would cause giant strides to be made in every part of our State towards the discovery of the most valuable grape or grapes for -ach locality.

Valuable determinations might be made in less than ten years, while if left to the present limited resources of this Commission, or private experimentation, done in an unsystematic way, it might take fifty years to attain results that at best could not be complete or authorative.

In continuation of the work of the Commission the further introduction and popularizing of our winesamong our own people in our own country.

Now that we have accomplished the planting of numerous and extensive vineyards we are making some progress towards determining the greater value of a few varieties of grapes over others, and have succeeded in making fairly good average wines, we have the next most imporant task before us, that of finding consumers for all we will shortly he producing. The best market must be considered the Home Market. That market is proven the best in every prominent wine making county of the world, and I cannot see why it should not be with us. The greatest obstacle to our success in this direction is, that the average American is a whisky drinking, water drinking, coffee drinking, tea drinking, and consequently a dyspepsia inviting subject, who does not know either the use or value of pure light

ate quantities. The task left listle returned School after the hes in teaching our proph show to drift the sound the first the visit wine, when to druck it end has more of abrary was kerry tot and essent it to drink. This same is and most included particled of may 0, proper apportant task should be derived in a most of same of the control of the control of the benefit of head and hear the control of th for the boundt of hostin and the projection of temperate. The kie verge of to ben fits of projet with discussions of be here, it by the nower of research broadcast and the same currents. culars, proceed by the restriction the restriction of a larger of the motion page. The know in of how to properly took use of most violate product to man should be much universal, and hand I down from father tes in in the same mather as found y legends are hand doison for generalities The people should be teight in the seletion of wines for their dary moul, as in best suited to the maint mane of head) and boddy viz r. is well as for a coable ness of taste. They should be taught the value of the lift rankinds faw is as for adjuncts; they should be taught in disin the simple but y ry med sorry cares not bet for the preservation of their loasit wines and their presentation on their to in a proper condition and attractive in ner. Extracts from sight books is the written by Dr. Drutt, the emment page. cian and viticultural writer, should be to ly circulated the ughout the land, placed within the reach of the mass - t learn the use of which to bow in of its abuse and box in the exponents of true temp-rane. At this stage of our viticultural progress, I consider it in a important to teach the people the proper use wine as a duly by rage, then the ext is tion of our vi syards, or anyo to a vision! tural work that the Camp issum can enter upon. At this error donorm at our future success depends up in the immediate populalar increas discuss uption of our wines, more than great reproduction, increased quality or any other thing that I can think

And while we are considering the matter of greater consumption and larger markets. for our wines, in our own o untry it may be well to draw attention to the fact that freight rates very greatly influence the possible mercuse or de rease of our Eastern and interer slapuouts. Thus, under former stiff rates, our shipments eastwart; shows a pritty constitut, internal increase of 300,000 gadons, fr in year to year, f ra arly ten years. Under the lower rates of 1885, the increase said buly went up to 700,-350 gillius ov r the previous year. And in 1886 when I notes were ruling, there's was a further more one over that of the year. 1885 of 230,000 gan us. It would be well for the Transportation to unjunios to consider this fact and devise some means for the transportation at such rates as wall permit this industry to develop its in gair, tude, and in to ise their own entrying trade. Owing to the distance separating us from our natural markets, we, in taithin)a, have much to sate of against. The wear from which or shipping casks are note. is brought from the East by rat, and is charged for it's much a pend command to us empty, and so much apart is it given from as alled with wire. These abilitions of costs, and they in into the denate, men assethe pure of which to the intumer, and tends to provent its more a mandless in the Atlantic and Western Scates. When our wines, in 31 th ir unity all diparity can be half down at the door of the Eastern Laborer at the same pro-t-him as local function of the Grap Grow as and Win . ? this industry will develop beyond our most sangnine expectations

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MR. T. HARDAS VINEYARDS.

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A DATAGE AND ADMITICATION.

Time of Aintage.

When the grapes are ripe they have to be collected in a clean and judicions manner, and to be transformed into wine without any unnecessary delay. White grapes are crushed and pressed; the juice, freed from stalks and busks, is put into clean barrels, and allowed to ferment in a cellur or other t inperate place. Black grapes which arto yield red wine ar erushed, put into vats juice, busks and all, and allowed to ferm ut un if the wine is completed, and has extracted the coloring matter. The wine is then drawn off, the murk pressed, and the united products put into barrels. While the principles of the most common methods of vimification are thus easily stated, the details to be not d are so num-rous, owing to the variations determined by different vines, customs, and countries, that we must state them in the chapters treating of the viticulture of each denopostic district.

The first condition of the viutage is, that the grapes should be ripe. In many parts of the south of Europe it is considered that the grapes are ripe when they have attain d their greatest volume. They are thin vintaged; but their must being quite unnit for the production of natural wine has to be plastered, and, after partial fermentation, to be mixed with spirit. It is thus clear that the time of the greatest volume of the grapes is not the one most suitable for the vintage, if the object of the viticulturist be to produce natural wines In the most celebrated vineyards for the production of while wine, the grapes are allowed to hang until they attain the maximum of sweetness and maturity, and are commencing to decay or to pass into the state of sweet-rot. Thus in the Sauterne district, the best berries of every bunch are cut out at intervals and carried to the press; and an antire harvest of a vineyard consists of several up to eleven separate gatherings of all that has attained the highest state of ripeness. In the finest situations of the Rhinegau, the grapes are not collected until the rains or frosts of the latest autumn necessitate the vintage. At Vouvray as at Tokay, the best wines are made from the grapes which have been the longest on the vine, and coll-cted the greatest amount of sugar. But the experience gained in the production of white wines is rarely applied to the white ones; for with them the production of a certain color is a dominant condition. The color required by the trade can only be obtained from grapes as a certain stage of maturity, and that stage does not coincide with the maximum ma turity which the graps can attain on the vine. Consequently, the highest quality of the wine is abandoned in favor of a conventional dve; and the unrip- wine has to remain years in barrels and hattles before it acquires the qualities which fit it for use. The Champagne grapes, on the other hand, are not permitted to attain the stage of highest maturity, because it is conventional that the effervescent wines of that country shall be as pale as possible, and not hav the slightest tint of redness. But whereas fully ripe Piueau always yields a slightly reddish, rosy, or partridge-eye colored juice, however carefully and quickly it may be pressed, this stage of fullest ripeness is not awaited in the Champagne, and the grapes are gathered at the time of their pields wine which has a somewhat tawny glucose be used. We have tried a variety the largest properties, are all carried in panniers on the backs of mules and donkeys.

red color, and not the lively dark red of old rhorry inice the wines of Burgundy are. with few exe prions, vintaged at the time

when the grapes produce the despest color. wine should allow their graves to hang on the vine as long as is compatible with the safety of the harvest. From time to time samples of grapes should be collected from the vineward, the berries should be mashed. pressed in a little hand press, and the juice obtained subjected to examination, particularly as regards the amount of sugar and acid present in it. The sugar can be easily ascertained by the use of a so-called alucometer or spindle of glass, such as is used for ascertaining specific gravities in general. The scale of the glucometer should be so divided as to indicate per cents, of fruit sugar directly, and not imaginary degrees arbitrarily fixed by inventors. But any gravimeter indicating specific gravities can be used to ascertain the density of a must, and from that the amount of fruit-sagar contained in it can easily be calculated Some convenient French glucometers are so arranged as to indicate by one degree of their scale a quantity of fruit-sugar which atter fermentation would yield a volume per cent of the must of absolute alcohol. that is, about 1500 grms, of sugar per hectolitre of must. When the sugar is calculated from the specific gravity found absolutely, the total solids found must not be taken for sugar only, but from one-tenth to one-fifteenth has to be deducted as being other matters than sugar. The sugar can be determined absolutely by the chemical and optical methods of saccharometry described in a subsequent chapter. Must which would yield from 6 to 8 per cent. of alcohol will give only "small wine," and grapes showing this quality of must should not be harvested. When the samples of must produced show above 8 per cent. of future alcohol, the vintage may be contemplated. But it should never be actually undertaken as long as by repeated trials any increase in the quantity of sugar in the grapes is observable. Even when the sugar has attained its maximum, and remains stationary, it is not on that account necessary to proceed to gather the grapes, as, if the season be favorable, they will still undergo beneficial changes by hanging apon the viue. In the north and centre of France must will seldom show more than 15°, but in the hottest regions of the south, in parts of Spain, Italy, Cypius, Madeira, must is produced which shows up to 24°. i, e, degrees of the French glucometer. Of course this sugar can never be entirely transformed into alcohol, as the action of fermentation ceases in any fluid containing above 16 per cent of alcohor. The excess therefore remains a sugar, as in the liquorons wines of Limel, and the sweet Sau ternes, which are now taking the place of Lunel. If it is not intended to produce such syrupy wines, the must produced can be reduced by the addition of water to 15° or even 12°, and will then ferment completely and produce dry wines of the best character. This dilution of a heavy must is preferable to the harvesting at the time when the trial juice shows from 12° to 15° If, on the other hand, a must coming from good vines in an unfavorable year shows but 5° of future alcohol, it may advantageously receive an addition of pure cane-sugar up to 12°, every degree requiring an addition of 1500 grammes of cane-sugar to each

of the best and whitest samples which can be procured, and find that they all impart a nasty taste to the fermented product. When the viticulturist has decided all Those therefore who would produce good the questions raised by these considerations, and made his preparations accordingly, he should proceed to the actual

MODES OF VINTAGE.

The most common mode of vintaging consists in cutting off all grapes and carrythem to the press. For this mechanical operation no particular intelligence on the part of the laborers, and no instructions on the part of the viticulturists, are required. Men, young and old, women, and children, may be employed. Each laborer is put to a separate row of vines, and told to pregress to the end of the row. All laborers are required to remain in line as that the work is equally distributed. They cut the banches off the vines with scissors or knives, and place them in little baskets. Every full basket is replaced by an empty one, and emptied immediately by the collector, who thus attends to the wants of from four to six laborers. The grapes are best placed into suitable vessels of the capacity of au hectolitre, so that the vintage is immediately measured, and the amount of work done ascertained. A butt of the capacity of an hectolitre will hold 50 kilos of grapes, and with its own weight of 10 to 15 kilos can be lifted and carried by a sinole man

The master vintner superintends the entire process. If there is a sufficient number of hectolitre vessels, they are placed side by side on the wagon and carted to the press. If this is not the case the hectolitres being counted and noted down, the contents are poured into a large vat, which is in atttendance on a wagon on the carriage-road of the vineyard. The vintagers may be taught to cut out of every bunch all unripe, corroded, or spoiled ber ries, and put them into a separate little basket. But is preferable to entrust this work of clearing the bunches to particularly instructed laborers located at the place of collection of hectolitre recipients. They should have a table, each sufficient to take the contents of a receiver, and with a pair of seissors should remove all bad parts, and all long stalks and tendrils. They should then separate the good from the bad, and allow the former only to go to the main vat on the wagons. The berries which have been ranged out may, after separation from the worst ingredients, he used for the production of a cheap common b verage A careful viutage laborer can harvest 125 kilos of grapes per day, which will measure 21's hectolitres, and produce nearly 1 hectolitre of wine. Five vintagers require one porter, and four such gangs require a superintendent. Such a staff of twentyfive vintagers will clear half a bectare of vineyard per day, and thus collect 59 hectolitres, or 2,500 kilos of grapes, producing 20 hectolitres of wine. The wagon carrying the harvest is best drawn by a horse. and attended by a wagoner and an assist Wherever the quantity of grapes is smaller, or the roads are not accessible to a drawn wagon, the harvest has to be carried on the backs of men or animals. But this mode of transport is also elected in places where it is intended to bring the grapes as perfect as possible into the press-house, as in the Champagne. Indeed, we believe that in that district the harvests, even of

EASTERY WINE GRAPES

Mr. High's experience with "various wine grapes," proves that we can learn the merits or dem rits of a vine only by trying it in various climates. A variety of grape apparently worthless in one region may be valuable in another to which it is adapted.

Mr. High commends the Catawba Here in Vineland I planted ten years ago 300 Catawlas. I have taken care of them, and now have but two of them left alive, and never succeeded in maturing a cluster of Catawba grapes.

In New York State the Concord is quoted as a hardy grape. It used to be so in New Jersey, but now (in Vineland at least) it is worthless; totally destroyed by mildew and black rot. Mr. High commends the Bacchus. I have discarded it as no good.

The Ives, for health and general reliability has almost a natural reputation; yet in certain localities in Vincland I have seen the Ives totally runined by mildew and rot.

A grape may rot one year and not rot the next. I tried the Noah, and some years ago it rotted and mildewed so that I was tempted to dig it up. But, last year, when black rot was more destructive than usual. causing a total loss of the Concords, the Nucle was a model of health and fruition in both leaf and cluster.

For twelve years the Ironelad grape has given me annual crops of good fruit, vielding from twenty to one hundred pounds per vine.

To test it severely, I planted a vineyard of Concord and Ironclad, the two sorts being set alternately along the rows. Last September it was interesting to see these two varieties, with vines interlacing along the trellis, Concord all rotted, Ironclad crowded with sound and healthy clusters. Yet it seems that with Mr. High the Ironclad " mildewed and rotted badly as any."

For me, I regard it (as J. Sacksteder of Indiana says of it) "more valuable than all the Labruscas of the whole country." I have set twenty thousand vines of it this spring, and contracted all of the Ironclad grape juice I can make at \$1 50 per gallon

It may seem strange to Mr. High that I have taken out Worden and Ningara to make room for the Ironclad .- A. W. Pearson, Vineland, X. J., in Orchard and Garden,

A GERMAN WINE CERCULAR.

The following letter from a German wine exporter is being circulated among wine merchants and others in India, Ceylon aud other parts of the East, and perhaps in Europe also:-"Your esteemed firm being mentioned to us as importing large shipments of cheap champagne or sparkling book, we beg to address directly our offers to you. We can highly recommend our cheapest quality at 12; 6d, net cash per dozen quarts (Samur bottles, which are smaller, can be delivered with a little reduction), packing included, c, i. f., Rotterdam or Antwerp, which is sold chiefly in your market. We beg to observe moreover, that you can have this wine made up with any brand you wish. We shall be pleased if you will feel inclined to make a trial, and remain, dear Sir, yours truly, P.S. -1f you require some other goods which you know to be of German origin, we are at your disposal." Thus, a quart bottle of champagne, "with any brand you wish," carriage, insurance and freight paid, is offered for 1s 014d, while the usual retail price in the East of champagne is five and six rupees or 21/2 to 3 dols per quart.

ORIENTAL WINE MAKING

[fontinued from page 57]

Mollah Hassan look d the vineyard over known as ruch thabit a grape of disconstitling flavor and sate ardinary siz. In parts of freely arrigated replicable grapes were a darfastened, and the down to be to a placked and banded to us by the vintager, back on the third day. Hisson hours difully two mehos log, one grape in dail 2 a how yer camer and in the fill well by shock his turbanch heed knowingly at a had hardly been applied at about rether their On the third by the skies and the reich-rebabis were smaller, but where the ground had been kept the dryest and the grapes grew less plump and shirty there Hasson staked off our purchas "T make good wine, he expected, grapvery important point, and so he insist dethinner than an egg shell. on the charce al fire.

On the day before the grap's were to day. Soon after his arrival his gheiam arrived with a big round cake of sweet must. The wine was frinkable essent as that I find are been set in sweat board of where are arrived with a big round cake of sweet must. The wine was frinkable essent as that I find, arthers I in sweat board of where with resigning and in a property of thing singular and are property to the property of the state was frinkable essent as that I find, arthers I in sweat board of where with resigning and in a property of the property of the state are property to the property of the sweet many of the same are property of the property of the property of the same are property of the property of the property of the sweet board of the property of the proper therein and had it heat d to the bening toper pitch. While it was like to thing of here In Hamakan the people, instead of rockfinished this to his satisfaction, he proabout a thousand pounts. They were to ye carefully worted ver, all unrips or hall grapes form; cost aside and spreadout on Manine Trightony T lephone combarefooted Jews were made to wash and directions with considerable velocity dry their feet, and then get into the hasseens. With their tronsers roll displayone. The Merchant is the only recognized scourges, is that the American variety applied writing in I am writing in the knee, they trod the grapes as other wine journal on the Pacific Coast

assistants throw thom in . This treating was kept up all lay. Hassan sitting watchfully by to so that the work was ther sizh-Mollah Hassan look dath sympard over lydn. As each panful was finished it critically, and finally soluted a vicility was dumped into a pirestalks and every-

flavor and extreardinary size. In parts of When the jars were about full they were the vineyard where the vines had been power flavor with a cloth, the form of the very lag in which. Hessau, herever, his ghoom carrying caming in a laster sif an upright sharm. With this hother sign these, and mad his way over to a corner) by max 1 up the solstere in the pars. of the vineyard where the irrigations water which wreakly showed signs of firm intetalks were found in a compact cake on the same in long warmth. If the earth, then they suffer. Hissin pit his hard to the pir or tirn I and if for another two weeks poshelf. about half any down, and with a source of when they are sufficiently our lander sly he works. silr valled in 1 th sin . In juwas quite warm, showing to stitle if it in his vines should never be arrigated, they get on was progressing projety. With the analyse I in box sof 50 absects, and agree is time saw in pacture and the moisture need I from the spring dash rith I as plung I they like their soles binding where they was party in successful and it will be a close binding where they was party in successful and it will be a close binding where they was party in successful and it will be a close binding where they was party in successful and it will be a close binding where they was party in successful and it will be a close binding where they was party in successful. rains, at any rate, there should be no urish from the wine again and the rughty remain for it in two weeks, and ire that grade right is gain after May. The graps would be churned and surred the mass of at. The ready for persons. In Trying, the stees. In Lorg in incl. in prime condition in about the days. Here formenting mass based and bubbled, and become brittly some graphs are to dry discountered from the constraints of the cons san said, and after superstang with the Modah Agha Hassan winkel a knowing same not dry chough, but the sweating a are used with a same and made in the same winder a are used with a same and the same winder and the same winder and the same winder are used with a same and the same winder and the same winder are used with a same winder and the same winder are used to be same and the same winder and the same winder are used to be same and the same are used to be same are used to be same and the same are used to be same and the same are used to be same are vintager for plucking and packing them in wisk and strok This bear 1 - very time of the expenses all this. lodals, we rode talk to I-heran. The luring the Lay Hissan march 1 the Joys. The White Mass of Al-xin line is the next day big jars were their nightly sourced into the color and repeated the strong-up with the strong-up and the out with wirm water. Hissan being process. Two levs lat r Bissan egg ar d. The seekless Santena's being planted and on hand to oversee the job. He would sit with an affair very like a small be seen. It is good though small very-ty. Planting on a mat smoking the Griffs and watching. This he new used instead of the lasher is done between January and April, cuttings the operation, overy now and then going and in a laff rant manner. The has not no greener i to rottell vin a Cuttings out to stick his head into a jur and smed was thrust fown to the bulgs of the jury are worth \$5 per 1,000, rest divines are \$2. and give furthers orders. At length his and swipt reind and raind for ten raif (Per 1,000). In making selection for vincritical nostrils were sensified, and the jury term minutes, keeping the liquer in a south North, the low damp lands an odd be avoidwere placed in full blaze of the sun to air elly. In a few cases Hissan called again and as the grapes without ripene driven and and dry. In accordance with Hasan's and order ith destroy skins in leading to a bloth in to be irrelled to the wet orders they were left to bake in the sind of the country for the days this property seas in begins, until a day or so be for commenting operations was reported, and in about three works extracts extenses on 10 a beson maintained by the commentation of the commentati tion on the grapes. At hight process force forcentation had say it. On the trentypet were placed ever the months. In the fourth day Hossin declared the wine ready meantime. Hassan had duly inspected the for straining. It was strained through a cellar, had it sampt our closic and any ounvas bay and stored away in carloys possible suggestion of in istore driven out some for mine hate us was bottled if its with a charcoal fire. There was no mois a matter bottles could begga his. These ture anyhow but Hassin said this was a baggalus are flot flocks of glass. More When stapty the merest hip of the hog ratificall will shaver on , but whom full they stand a good I al come in Hassan put in his appearance, as if kn cking about. The baggile Life usual, after dode board. The pers had at ut a post and a half, N is brown

cook to borrow a copper kette. After fully deceptive. One glass would find the smelling of the kettle and extension gut to be (wherealouts of a person's head three). The properties of the control of the kettle and extension gut to be (wherealouts of a person's head three). heated on the fire, he placed the tallow glasses would lay out anybody but an old

corried it down the collar, and with a little ingothe win offinite orboys, keep it in the white wash brush, spread a thin film of big pars. These are half borred in the tallow over the monde of the pers. Having grand entedors, and in the winter or severelessing hears of horse manufact nonneed everything ready. Coths had keep the wine from freezing. Will made been spread on the cellar flor, and a Persian wine does not not be be kept aircouple of basseus, or distrarthen a re-pairs, tight. The Persians merely trace of about provided. Next day came the grapes, a wad of estion over the in ath of the car-

that is regarded among the Michamm lans, vissel also has a sound receiving apparatus, age lampness and humaley, as disreputable. No Mohammedan would to take signife. But eightle signife could. These two varieties of fingues had post man, and it is think the gas in the engage in treading out wine except he was be produced by this apparatus, which would certain of never being found out. The two by transmitted through the water in all

CALIFORNIA RAISINS

A Few Highres that will Prove Inter esting to our Realer

The F = 5istrays. Cash minus has growing the mast rusins in the world outwils not pump it lifeties. Over some esoft was wire rad in the State Parce 1887. The park grown is 1888 and and has write to the and for each bigins of the August Little and the process $-\Delta s + \beta t_0 + s \beta t_0 \cdot$ grap sound injent to the trouth was and past howelf harries relations where they are off and our of all the tagreceived the depthy the Lord fith partie received borths switching priess. At this part they or costing tak in from the books!

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RESEIPTS.

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Where the profits of vin yards every year vines will be not a seas a up from \$150 to \$200 per acro, but this is the result of experience and good manages. ment. As it is the purpose of this artito present only such facts as will show the yell dan overse vin yerl, these special as a sreat to the sletched asia of calculate to

GRAPE VINE MILDERS.

Ther are two kinds for I with at the now appeared upon the scene with a couple at a dy means for a sound proluming query some varieties in the formula of the formula of ranged Jews. In Persia, Jews are all paratus attached to each vession, to be written as a range of the formula of ways employed to perform any mental task and under the surface of the water. Each that in the sith at artify romy of sorr location we years years it will be good

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THE MINE AND HIS PRICE

(Continued from page 55,)

In continuation of the subject in the Vineyardist, Dr. McCarthy says: Among these early vineyardists, it was very well understood that grape culture should, in the main, be a business in itself. As long ago as in the time of this, it was made a rule and put into writing. "Thou shalt not sow thy vineyard with divers seeds: lest the fruit of thy seed which thou hast sown, and the fruit of thy vineyard be defiled? In other words, attend to your grapes with care devote your energies to them-do not spoil your vines by cumbering your ground with too many different productions. Is not that good advice even yet? About the only thing that ever grew in the vineyards besides the vine was the fig tree. These were often planted in corners by themselves, and hence are frequently spoken of as accompanying the vinc. "And Judah and Israel dwelt safely, every man under his vine and under his fig teee, from Dan even to Beersheba, all the days of Solumon "

We hear even now of grape thieves along our lakes. They had the same trouble three thousand years ago, and to guard against such lawless depredations, law was laid down to cover the case: "When thou cometh into thy neighbor's vineyard, then thou mayest eat grapes, thy fill at thine own pleasure; but thou shalt not put any in thy vessel." If, in other words, a good vinevardist is kind enough to let you have your "fill" at his expense, do not be mean enough to fill your basket also and carry that away with you. If you do it in his presence it will be "piggish"-if in his absence, theft.

Every once in awhile some of our vineyards are damaged by hail. The same was true in ancient times. David says: "He destroyed their vines with hail and their sycamore trees with frost." And furthermore, these ancient vinevardists were troubled with foxes, jackals and wild boars, This is referred to in one place where the question is asked, "Why hast thou then broken down her hedges, so that all they which pass by the way do pluck her? The boar out of the wood doth waste it, and the wild beast of the field doth devourit." This is an instance in which the church is spoken of under the figure of a vineyard. So they built walls, and set hedges around their vineyards to protect them, and also built towers at convenient points, from the summits of which they might be watched. In the days of Balaam the wall was common. "But the angel of the Lord stood in a path of the vineyards, a wall being on this side, and a wall on that side," And in Christ's time, he alluded to the prevalent custom of building walls, setting hedges, erection towers for observation, as well as having wine presses in them. "Hear another parable: There was a certain house-holder, who planted a vineyard, and hedged it round about, and digged a winepress in it, and built a tower, and let it out to husbandmen, and went into a far country,"

The prophet, Ezekiel, who lived six hundred years before Christ, under the figure of a vine placked up and wasted. reveals the coming desolation of Jerusalem. and at the same time, shows us incidentally the ancient mode of "staking and wlring" their vines. He says: "And she had strong rods for the scepters of them that bear rule, and her stature was exalted among the thick branches, and she ap-

her branches. But she was plucked up in a fury, she was east down to the ground, and the cast wind doed up her fruit; her strong rods were broken and with red; the fire consumed them.

Dr. Smith says that the ancient Hebrews probably allowed the vines to grow trailing on the ground or upon supports. This latter mode of cultivation is that to which Ezekiel alludes, when he says ther strong rods were broken and with red " Dr. Robinson, who studied in Palestine, describes how he saw them trained; "They are planted singly in rows eight or ten feet apart, in each direction. The stalk is suffered to grow up large, to the height of six or eight feet, and is then fastened in a sloping position to a strong stake, and the shoots suffered to grow and extend from one plant to another, forming a line of festoons. Sometimes two rows are made to slant toward each other, and thus form by their shoots a sort of arch. These shoots are prun-daway in Autumn."

Palestine has always been a land of vineyards, where the vine was extensively cultivated, and where it grew to great abundance. When the spies were sent forth to view the country, preparatory to its possession by the Israclites, we are told that "they came unto the brook of Eschol, and out down from thence a branch with one cluster of grapes, and they bare it between two upon a staff; and they brought of the pomegranates, and of the figs." Eschol means "the current of the cluster." They came to a magnificent vineyard, through which a stream of wat a flowed. "The place was called the brook. Eschol, because of the cluster of grapes which the children of Israel cut down from thence," That cluster was borne "between two upon a staff." not because of its weight, but so as not to crush the fruit. The same thing is often seen in Palestine at this day, when men carry clusters at times weighing a dozen pounds, the berries being as large as plums. The vine in Palestine not only produces luscious grapes, but they grow to great size, attaining at times a foot and a half in diameter, and a height of thirty feet

To these same vine yards does the prophet I-aiah allude as the land is over-run by its enemies, and the delightful places are laid waste - "For the fields of Heshbon bungnish and the vine of Sibmah; the lords of the heathen have broken down the principal plants thereof, they are come even unto Jazer, they wandered through the wilder ness; her branches are stretched out, they are cone over the sea. Therefore, 1 will bewail with the weeping of Jazer, the vine of Sibmah: I will water thee with my tears, O Heshbon and Eleabh, for the shouting for thy summer fruits and for thy barvest is fallep."

Dean Stanley thus speaks of some of the vineyards he saw there near Bothli hom in modern times: "Here more than elsewhere in Palestine are to be seen on the sides of the hills the vincyards, marked by their watch towers and walls, seated on their ancient terraces, the carliest and latest symbol of Judah. The elevation of the hills and table-lands of Judah is the true chmate of the vine?" "He bound his foal to the vine and his ass's colt to the choice vine; he washed his garments in wine and his clothes in the blood of grapes,"-Jacob's prophecy of Christ, his death being symbolized by the blood of grapes.

peared in her height with the multitude of Judea was almost universal. In the 15th chapter of John, it is also beautifully made use of for the purpose of showing man's relation to God. "I am the true vine, and my father is the husbandmen. Every branch in me that beareth not fruit he taketh away, and every branch that beareth fruit, he purgeth it that it may bring forth more fruit."

> "He pruneth it that it may yield large and better fruit -that is what it teaches. Every vineyardist understands what that means. The burning up of the waste branches after the pruning is also alluded to: "If a man abide not in me, he is east forth as a branch, and is withered; and men guther them, and cast them into the fire, and hey are burned."

(To be continued.)

HINTS TO GRAPE GROWERS.

During the month of May, just ended, there was considerable rainful in many parts of the State, particularly in the Pi d mont and Alpine regions, where the people are making note-worthy progress in grape culture. This kind of weather, if it cou tion's well into or through the month of June, betokens bad things for the grape crop. So far, the temperature has not been sufficiently hot, as a rule, to develop the spores or seeds of the fungi which causgrapes to rot. Hot weather is almost sure to prevail in June, and if frequent rains accompany such hot weather, the conditions are favorable to the growth of the fungus, and it is apt to show itself, and do an untold amount of damage. Some preventives "for black rot" have been tried however which have given very satisfactory results to vineyardists, North and South. One of these preventives is bugging the grapes by enclosing each bunch in a paper sack, and the other is sheltering the vines from the rain. Bagging is easily and rapidly done after a little experience, and is not costly. Paper sacks can be purchased from dealers at the North at about 75 cents per 1,000probably less. Pins of the cheapest kind will answer the purpose, costing about two cents, or less, per full paper. Open the mouth of the sack with the fingers, blow into it as the store clerks do, and it is inthated so as to remain onen until it is slipped upward over the bunch of grapes. After this is done, gather the topmost part of the suck with the hand and fold it over the cane or vine from which the cluster banes. holding it with the left hand while with the right hand insert a pin through and back again, thus securing the sack firmly in this position, leaving no opening to catch rain water. Care should be taken to leave plenty of room in the lower end of the sack for the lengthening out of the bunch of grapes as it grows. To this end leave several inches of space, while at the upper end leave the sack full and without folds. The lower corners, or at least one corner of the sack, should be clipped with the scissors, so as to prevent the possible accumulation of rain water in the sack, which would ruin the fruit. The work should be done now, while the berries are small and before the fungus spores have already attached themselves to the fruit. If dore in time the grapes will be saved from the ravages of fungi, birds and insects, though the bunches so enclosed will ripen a week or so later on account of it. The reason of the process is clear when we consider the way in which the fungus disease is spread from vine to vine and from vineyard to is all the cuatomer sees .- Lewiston, (Me.) In the days of Christ, the vine culture of | vineyard. From the observations of micro- Journal.

scopists who have made these things a careful study, it can no longer be disputed that the cause of the rot is a vegetable fungus-a real vegetable plant which grows upon the vine and its parts as the mistletoe grows upon larger trees-and that it hears seeds that float about in the air as dust taking root on leaf or fruit wherever they may stick by contact. The first bagging of grapes was done in the light of this idea, and was tried as an invention to mechanically prevent the contact of the fruit with the "disease," It has so far proved a success, and an only remedy, since sheltering the vines is too expensive for profitable grape growing. Bagging has proved quite successful in Greenville and other places in South Carolina, and is not to be regarded is a fanciful theory. It is as practical as mything else in agriculture. If we could teep the seeds of weeds and grass from the seil we would not have wieds or grass to contend with in the cultivation of our crops. so with the seeds of the fungus which anses our grapes to rot. If we keep them rom contact with the fruit we prevent the of We have heard of an instance in which bagging fail d to provent it, but, in he face of the universal saccess of the nethod in the largest grape growing secious of the country, we are obliged to beieve that in that instance, or in any such ustance, the bagging was done too late or too carelessly. The spores of the fungus tre produced and r conditions of the combined heat of summer and moisture-continued wet weather. These two thiogs are accessary to its fecundity and spreading.

Sheltering the vines by placing some sort of cheap roof over them can, of course, be practiced upon a few vines for the table supply, and never fails of the best results. The reas m of this method is also clear: the necessary water on the vines is prevented. and without the presence of this water, though the spores or seeds of the fungus be on the vines, they cannot germinate and cause rot.

HOW PROHIBITION WORKS.

A scene io a Portland saloon is thus described by a writer in the Portland Exchange: The bookkeeper was bringing forth beer from a hole in the wall back of the counter. Suddenly a watcher rushed in and cried: "Here de, cum!" Presto, change! In an instant the hole in the wall was covered with a picture of "Washington Crossing the Delaware." Glasses were thrown down a trap door into the cellar. and when the d puties enter, the smiling clerk is busily engaged in selling cigars.

In another saloon, the reporter found an innocent-looking sink. No one would think for an instant that anything besides a harmless Sebago ever came from the faucet. A workman with a dinner-pail in his hand, came into the saloon. He walked up to the bar, and laying down his pail, requested the bartender to fill it. The dispenser of ligner walked to that identical sink and filled the pail with foaming beer from that

There is a liquor shop in Portland, where the customer sees only a cigar-counter, and no person in charge of it, when he enters, At the end of the room is a plank partition with a hole about six inches square in it, and a small peep-hole about a foot above. The customer walks to the hole, calls for his liquor, lays down his money on a shelf beneath the aperture. A hand takes the money and sets out the drink. The hand

NO FREE FRADE WANTED

aisin Growers call on Senator Stewar for Help

The following petition is body ar more I mong the raisin in n of this county, and being generally signed. It is sufficiently cultert in all its terms to be easily underood, and is considered by many to be an aportant oneve politically, which will ave great bearing on the coming com-

Hon, William M. St. wait, S. nator from evada-Drag Star. In the famure of any illing or complicht riprochistic or cur wn state to lift a vone in our b halt, w re raisin growers of Fresno county, Calornia, appeal to you the representative of noth r state, but a senit cr whose rights the prole of our slope, arresponding of arty, and whose bread statemenship as hown by your course in congress, oneraces not only the interests of y ur own tate, but those of the while coast and the attre country

Under the kind influences of our skies re have been induced to inaugurate in instems! popular citizens. Mrs. Swarthout for its excellent affectiving elements. ustry new to the American continent , was ninety-four years old in January last, apital and later invested. We have sume the physician said the broken parts would them. Impure water trees a sort of fundy toiled on in faith until the time the not unite and heal on account of here we goes at the roots, which soon destroys them rofit should come.
But now through

But now through the grace of his map sty, he reigning presid int of the United States, nd his followers, we are confronted with proposed reduction of S_x cent in the anif upon raisius

This fraction of a cent may appear idiculous thing to a body like the senate omposed of millionars, but to us pos -read-winners it is vital, and represent he profit we have been struggling an

toping for through years.

Spain, our competiter, has these advanages, she can get lab r at an average of cents a day, and she can land he aisins in N w York at a fr ight cost of ents a box. Our labor has increased upo is to a dollar and a half per day, no mat er what element we employ, and is likely o go higher: while despite the govern cent's minimicient subsches to build con inental rathways, we are compelled to pure average of 38 cents a low togit on

aisins to the eastern market.

Protection has not increased the price of raisins. Competition alone has regu ated the market value. I'mbr our he dvantages of labor and transportation the tariffs is the only thing that gives u even a fighting chance

Unless congress is willing to hold th hield before our infint infustry, or ausous hopless. From the time the fire ox of Californic raisins wire off red i be market the Spannard has stood at the loor, pontard in hand, and evering take he American product. It is for the hone able senate, which we have been taught t believe is the guardian of the general wear o determine who then the attempted assi sination shall succeed or not

We present these facts knowing we ar humble and insignificant factor in th great economy of the union, but trustin on will realize that no single industry is he nation can be stricken down withou njury to all, and that our poor welfare is is much to us as is to them the interest of be richest or greatest

We put our trust in year at I the hot or is to me od az , but in this how as need kin ble sentence stand by us into rice we are rained.

GRAPES AS EGOD

professions, also resented Very roles, that as food for ham in bours, there is nothing one gone, will in all foths year and up to in all the π g table world and its vist name, the D' by (f M α) she as eat in an average lets of productions superior to, exception of two pounds a day. tygood varieties of ripe cripes, and they due d, or fresh from the city markets.

own graps growing region, we mention the trew - pl nuful,

as the firsk momentum speedup resolver to the is now as a find is ever.

Mrs. Switth at less by now for $\Gamma \to \psi \psi \tau$ for years, and is firm in her beach that sh It is now universally made 1 d by all could not live without them. She begits scientists and well informed men, in all with the earliest grapes in August, and continues to at if their dray mutility

not only good strougth, in him mental vietgrape region that the earge number figure viety viety which is the entering of thems to seas which with the season of the region of the season which will be season which will be season of the entering of the season of the entering of the enteri were bit rister the sick and delibert the their assets of proving and slapping, which h with, when eaten freely derived the vine is from 8 pt ml r to Do interestrict retail in erg selection powerful their tage times of the year, in the vin york gain in their from two to twenty points regions of all countries where they are presental many where one from the violages and a fitther. Ten Alyssia retricted in an inand or fresh from the city morkets. Cities in 1 had beautiful reduced to their geometric had view group of the reduced abustration of their natural. In most word, hearty and strong, and this an imply tray. In your largest leading tive and health-inspiring qualities in our is one fathe reasons why halp in grapes is a fathe grapes, and, and that it halp happy should

sid's with her somem-low, d. P. Crosby most significant import, which speak who of vertile heres that the provides an extensive grape-grower on lake mans in favor of the claim mode for the 48 Mee limit the new rows. They are of the and the protective policy of the government. Kouka, and one of our best known and fruit of the vine, as superior to all others that the second of the laye, and

ide, hoping for a happy success. No sustained a fracture of the arm through arts. Dr. J. W. L. Thu hound, in a community aisin vineyard in Coliforma has ever recongo and again a year later, by being thrown, from to the London Society or Arts, that aid now adequate per cent, upon the from a carrieg, and on the last occasion, only pure water must be used in watering P3.

CALIFORNIA RAISINS AREAD

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as or approved to divince the diswas The California rand . Larry to

In Mostary is a torregular torr of two points a day make 2 masses. Where the 20 p. At its associated stablish for them this Bound on the following the

The trays or then olor. The empty to year as we had betcase of Mrs. Physics Swarth at, who real These are facts and circumstances of this up with hold as willing in terms are then tak notes the they are kept for a lot to be As. They We have had many trials and discourage and now in good health and strength, not. Warrantorrants—Persons whose plants are then perkeringly a form and term leaving been sick in years, although she mysteriously sick until he are warned by what is known as the "Lend heaver stylede, herring for a handy entone". No sustained affection and the armother may be a second of the perkering to the perkering In rear- no is there as instanton worthing do there as $t(x)^{\alpha}, (t_{-1}, \cdot)$ then. The problem history is s = 0 by so. In 155 cm was my to They do it is ex-

EAST BOUND THROUGH FREIGHT.

Forwarded by the Southern Pacific Co., May 1888.

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FRIDAY JUNE 22, 1888

FOR SALE.

A Wine Press.

- APPLY AT-

Office of "S, F. MERCHANE!

PRECOCIOUS OLIVES

EDITOR MERCHANT:-In the short leader you dedicate in your last issue to the importance of olive culture, you mention that in the southern portion of the State, trees which are less than five years old, are now laden with fruit. In justice to our own bay portion of the State, let me mention that Irvington is but ninety-five minutes distance by rail from San Francisco, and that the young olive trees on the grounds of the Gallegos Winery here before they were then three years from the nursery, bore a copious crop last winter. From one of the hundred and odd trees I picked nearly eighty pounds of ripe olives of the Mission variety.

This may not be a solitary instance. For a certainty the level ground at fryington, as fertile as one can find any soil, seems to favor the olive to a degree which can not be ontrivated by much advertised Southern California. F. PDFF

Irvington, June 12, 1888.

THE FOLLOWING vineyard notes are gleaned from reports presented before the late meeting of the Santa Clara Viticultural Association:

Considerable trouble is experienced in Napa, Sonoma and Yolo Counties, especially with the army worm. A new disease known as root-rot has done some damage, chiefly in the canyons at Glen Ellen; some injury is reported from frost. At Livermore endeavors are being made to raise \$250,000 for a co-operative winery. One is also projected at San Jose, and a new winery is talked about for Mountain View. The vines in Cupertino distric', the Santa Clara valley, and along Stevens Creek, are said to promise first-rate crops.

ATTENTION is directed to the advertisement of S. P. Taylor & Co., which appears in another column of the Merchant. This well known house, dating back in the business annals of the Pacific Coast to 1856, is still to the fore, as the leading manufacturers and agents for paper of all kinds.

Semi Annual Regular Manthan Election of Officers

The regular semi-annual meeting of the State VitienItural Commission was called to order by Vice-President Wetmore Monday morning. There were present Commissions Wetmore, Krug, West, De Turk, Shorb, Manlove and Doyle, also Chief Excentive Officer Wheeler and Secretary Clarence J. Wetmore.

Chief Executive Officer Wheeler reported that the report of the last convention would he ready in a short time for distribution: that the 1887 report of the Commissioners would soon be ready to be sent to the State printer; also that he has had translated a treatise on wine making by Ladrey, and when printed by the State Printer would be for free distribution,

The Chief Lxecutive Officer was then instructed to confer with the Committee on Distillation and prepare an essay on distillation, and to submit the same to the board

The election of officers for the ensuing year then took place, resulting as follows: President, Charles A. Wetmore; Vice-President, I. De Turk; treasurer, Charles Krug; secretary, Clurence J. Wetmore; Chief Executive Officer, J. H. Wheeler.

Mr. Doyle then offered a resolution, which was adopted, directing the Chief Executive Officer to ascertain and report to the board under what section of the Revised Statutes and Departmental Rulings cherry juice, so called, is admitted by the custom officers at a less rate of duty than distilled spirits, which form a component part of it of chief value.

At the afternoon session Mr. Krug moved that the President appoint a standing Committee on Statistics, whose duty will be to supervise and direct the gathering of statistics in conjunction with the officers of the commissions. The motion was carried and the president appointed the following committee: Messrs. Krug, West and Shorb,

At Tuesday's session, C. A. Wetmore, chairman of the Committee on Permanent Exhibit and Viticultural Trade Exchange, reported that the members of the committee had consulted together and bad agreed upon the following prospectus.

Prospectus of proposed Permanent Exhibit and Viticultural Trade Exchange, under control of State Viticultural Commis-

First--A commodious store should be rented, on ground floor, with good cellar, in a favorable locality.

Second-Transfer of all the present offices of the commission to such store, after fitting up suitable rooms by proper partitions, etc., reserving the larger portion of such store for (a) permanent exbibit of wines, brandies, raisins and other viticultural products of California, together with maps, photographs and other illustrative attractions for the general public.

(b) Sampling department, where an opportunity will be given to purchase and sample any of the products offered by producers and admitted in accordance with rules governing the same; exhibitors in this department to be credited with proceeds of products sold at their regular trade prices and profits of retailing same to defray expenses as far as practicable, and all surplus profits to be paid into the State Treasury, Visitors in this department to be guided only by their own tastes and desires, aided by the catalogue; all interference on the part of the management and

THE VICICIATIESAL COMMISSION. service in guiding taste or selection to be strictly prohibited. The management not to be responsible for unsold sample, excepting reasonable care of same, which shall be subject at any time to withdrawal by the exhibitor after paying any necessary expenses incurred specially with respect to them; such exhibits shall be subject also to be returned to the exhibitors at any time in accordance with the rules of this department, Sampling also provided for in this department of such experimental stocks which are the property of the State from the experimental cellar as may from time to time be determined.

Prices for retailing samples to be as fair as practicable, but so fixed as not to come into unfair competition with the ordinary retail trade. All attempts to use this department for the purpose of undercutting fair trade prices to be discouraged by strict rules, but every encouragement in favor of good prices for superior goods to be afforded in order to stimulate the production and care of fine products.

(c) Viticultural Trade Exchange, wherein facilities for producers, brokers, tradesmen, and wholesale merchants to meet and examine products by sample, will be afforded subject to special rules.

(d) Cellar for storage and experimental work.

Third-Management: The permanent exhibit and sampling to be under general direction of a special committee, and managed by an officer of the Board, with such assistance as may be found necessary In case this work is added to the work of the secretary, an additional compensation to be allowed for the same.

Fourth-The Exchange Department to be organized by the Executive Committee of this board, with power to associate with them an advisory board of control from outside the Commission whose rules shall first be reported to the Commission for approval,

A PERMANENT EXHIBITION.

After considerable discussion on the above plan, the following resolution was offered by Mr. Doyle and unanimously car

Resolved. That a permanent exhibition of viticultural products of the State be established in connection with the offices of the Commission in the city of San Francisco: that the plans outlined by the Special Committee just reported, be approved, and that it be referred to the Executive Committee to prepare and adopt the details of such plan, and to carry the same out; that the premises under the Mechanics' Institute building on Post street are deemed suitable for the purpose, and the committee is authorized to rent the same unless more desirable ones be found, and fit the same up for the offices of this Commission the permanent exhibition of products aforesaid and with a view to the establishment of a Viticultural Trade Exchange on the same premises.

NEW COMMITTEES APPOINTED.

The President then appointed the following committees: Executive Committee, De Turk, West and Manlove; Auditing Committee, Manlove; Finance Committee, Doyle, Rose and Shorb; Vine Pests and Diseases of the Vine, De Turk, West and Manlove; to Confer with Board of Regents, Doyle, West and Krug; Distillation, Counterfeits and Adulteration, Shorb, West and Krug; Evils Resulting from the Introduction of Foreign Fruit Juices as at Present Allowed, Doyle, West and De Turk; Raisin and Table Grapes, West, Rose and Manlove; Experimental Wine Cellar, Wetmore, De Turk and Krug. Mr. Shorb then moved that a committee of three, of which the President should be Chairman, should be

appointed to wait upon Miss Kate Field and see if she would accept the office of Lecturer for the Eastern States, on subjects p-rtaining to the wine industry, and if she would ac ept, to see if satisfactory arrangements could be made. The following committee was appointed: Wetmore, Shorb and Dovle

On the motion of Mr. Shorb, the Execu tive Committee was instructed to draft a set of resolutions showing the appreciation of this commission for the work done in the past for the viticultural industry of the State by Mr. Arpad Hrrasztby, late Presideat of this commission.

A COMPLIMENTARY BANQUET.

The following members then waited upon Mr. Haraszthy and notified bim of the action taken by the Board, Messrs, Wetmore, Maniove, De Turk and West. They also notified him of the act of the members, unofficially, in inviting him to attend a banquet at which the principal vine growers, merchants and other prominent men will be invited to be present. The banqu t will be given to Mr Haraszthy some time in July.

Mr Shorb notified the members of the commission that the condensed must bis ompany had sent to England had arrived here in good order: that they had fitted up place in London, and had fermented out 10,000 gallons of wine, and that wine experts there had pronounced the wine made to be superior to that made from Italian must. The meeting then adjourned.

GOOD BRANDY GRAPES.

IT HAS BEEN found at the recent cone urse of agricultural exhibitors at Auch in Southern France, that the introduction in the vineyards of that region of the Cabinet variety has caused a complete change to superiority over the former product from the habitual varieties of that department, Of American varieties Herbemont-Fouzan was found to have yielded the best wines, nearly acceptable to the trade, as it is only slightly foxy in taste.

Noab and Elvira appeared of no use for wine, but the wine made from these two varieties seem to have in its (wild) rank taste a fullness which imparts merit to the distillate from them, and the growers in Gers are advised to propagate the Noah and the Etvira plants for the production of good

THE CELEBRATED brands of fine old whiskeys, for which the firm of Dickson de Wolf & Co., are the sole agents on this Coast, have won a high reputation among consumers, who appreciate the evenness of quality, which has been maintained during the many years they have been in the market.

The names of these different brands, appearing in the advertising columns of the MERCHANT, have grown to be honsehold words with the people of the interior countries, their medicinal properties having been satisfactorly tested in cases where an absolutely pure stimulant was required. The name and reputation of this old establisbed business bouse is a sufficient guarautee in itself of any goods it may place on our market.

SECRETARY WHEELER of the State Viticultural Commission has received a letter from St. Helena, stating that the grape erop in that district will fall much short of the earlier expectations, owing to content and other diseases. The grape crop of the northern counties will fall far below he average, and only in Santa Clara connty the counties immediately adjoining, will there probably be a full crop.

THE CHEMISTRY OF WINE

rine, the changes which take place are numerous, yet there are two principal ones o which special attention is usually direct d by experts, who judge the qualities of rine. These are

First. Bouquet and thee restal Second. Claimess and brightness

To what agency the changes produced in vine by age are due, but very few experts are to inquire. They simply look for the onditions desired, and wait for time to ring them about In the ripening of wine. lowever, as in all other organic changes very eff of has its cause, and the relations of cause and off of cau be traced by means of chemical audy-is, and the study of hemical affinities.

That the desirable changes produced in cine by age are chemical, no doubt can xist among sepentific investigators.

In the production of bouquet and flavor he fusel oil, and other essential oils, mite with alcohol and form a new dement called aromatic other. This makes it agreeable to the taste and healthy. o the consumer.

The good (ball or negative effects of corain substances of every day us in their simple form or in chemical combination, may be illustrated by a few practical eximples, to wit:

Lye and oil when mixed in proper proportions and h ated, will unite chemically and form a new substance called soup.

Fine soap may be eaten in considerable quantures without producing any constitutional meony mene, yet if the same quantity of ive from which the soap was nadshould be swall swed, the results of its corrosive effect would be very serious.

Tartaric send and carbonate of seda when aken separately are disagreeable to the aste, and deleterious in their effects, but when mixed tog ther in water they proluce a pleasant and healthy offervescent Deverage.

Common salt chlorid of solium is a eration of food over the eather civiliz d

The air which we breathers compes lefxygen and nitrogen, the water which we lrink is composed of hydrogen and oxygen, and one each of hydrogen and natrogen to a in the wine industry of the will is an particle lain code in the wine Weight compose hydrocyanic acid, one of the most lyint of the new future.

The is in a lot a delitable lain experience of the most lyint of the new future. compose hydrocyanic acid, one of the most of all dish as future. leadly poisons known, proving in many cases almost instantaneously ridal. A granand a half of the anhydrous acid is capall. of producing death in the human subject, sufficient to kill a vigorous dig in a few

em would be personous, while the same with with 1 st of drains elements under different chemical combina-

such is not the case we will presently show, subject of wine

All new areas centary profits come. Mass F. Alter and it In the riponing, maturing or agoing of post-1s in the term of arbitrarily persons which take blues are case in and glaten. It is a fact beyond a consequence of the prestrantial wine can nover applied 1 — Ar — Colors of helberght as an grastifier substruction of the restriction of the region of the return a restriction of the return and return a r impounds are torrest, proteins body and this kingwithrichness in the wine while to result in solety had qu the form of most tannetes, readily a paratis. From spick and a from the wine by facing to the bound of a selection of a larger a the vossel continuous it. This residence is a second of the first term with observant bright. A second of the seco

It is due to these tatrogenous or protesimporteds that societary and tartify not a cother she rever a fermentations take place, and ne wing wis before snell as net exh. is ne keep well in is fit for as untuities are 1 so too in- bod at a little? posed of In their right distance they he as lear openion between the limped as the wine itself, so that is every all others as at a d fining or fidence can rem votte a Their removal is, however and desiral for these are evidency ast as assume a producing rubb as and be by, as the line of in producing flavor and 1 (liquot)

To illustrate the assume of make when separated from the whey, or wat ry pertuand pressed but a sould be by make so he so Nothing, however is more tisted as and insipid than now chose, but when it is comes ripe with $\tau_{\rm s}$, it is transform domain a delicious article of history

that germs propagate and grow (N) germs (under their roots of a section can exist in an old wine is which the stell from Miss 1: 11 - 1. proteins compounds have assented to with district to his specific, to a distinct combinators, and have was distinguished a historial and the to exist definit by as such

A good ripe or mattre wine is that for one in which the essential oils have transformed into an area others, in conproteins compounds have assumed to a social looky of chemical combinations and the result of the contract of tannates, tartrates and other foreign is its coming one personal value to the ters have separated from the wine $y \neq r$ in guilfight risks, morely figure eightation. The wine is then where $t \neq r$ to a 1-V term in w = 0 and 1-V term. and can be kept an unamated on the frontship the writer of lead to. time, and is at any time for itse-

Common salt chlorads of solium is a upon to bring about those homer to explain highest estimates abstance that is used origing in the preparation of combinations. A though a hibrir way we are for a many assistance that is used original to the preparation of th vast amount of intillectual labor, and protechedus exceeding was from world, yet chloring one only a data a rank large sums of men y have been expended through the most stand the high two poison.

What amount of invasional and seven that true tamperant laby Mass F. I Apriles, yet no sine soful in the law service shed not the lawness of information of bound, till Dr. Freser's lise vary was norbere a bound what our Sover also say of identified in the magnitude in 1. That is 111 section and the food which we cat is composed this process does actually save an immerse. Livington, Ca. Jun. 14 1888 argely of carbon. Without air, water and aim unt of time, a vist expense, and p. oed all life would immediately the mean discussive discussive and to those acquired by the discussive discussive and the arrows the discussive and the arrows the discussive at different and the arrows the arrows the arrows the discussive at different and the arrows the

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the second read how the the theory is a part late to the term procumed the most sent wisting. A few years I common to egine prose ats ripation, W. Vit. a.t. o. Faranche of two South in France As agit by presentation of a threes the relies of the opportunity or opportunity of the first term with a state of the stat area, great was the strife for The fire Grapewer wallable, but to some a time of user or his real mesustant should secreted in order ... a better experiment. They proith six list from isy sock line wat r. Vicinity inputitors wirk both in presses the driftle storp only, and so so led to the staff the water. Lille's press as that I to have squared and the greatstore and but not satisfied with this, the a variate easist dampen atryet, what his that have a mile now with the hardly in 1st sawe first present by the others. He separative and the has press and the real of the with the sew list taken out to the cost press present the real results of the other than the sew list taken out to the cost present the results of the sew list taken out to the cost present the results of the cost present the results of the sew list taken out to the results of the cost present the results of - Arit the growing running of this has a minimum after a few control of several gallens and the state of the poems could its from to mexiconing to view of the of the descriptions business and surface of the sur

Mosts Par who pack to product the form. Freedom someon to and oter I and a negotian as with him, only so and the velisive put ut in the Australian Bing renofitiesh and of great mys whetpool their presses arymore is at the state, and the I will be est in indistry of y may well be provided they may city day at their factory, where is a little to be placed awaits all

WHAT A TON OF COAL MITLES

not be a described pulled for the pullecan be water to ryalive gala li water, from who has obsayf rags situril constant primas from It ti ta fi la llas last-named the transfer of maghitha, the region of the first that the second of the second o

our	NATIV	E WINE	SHIPMENTS	RY	SF	l A
		-				
	TO NEW	YORK.—PER	Ship Granada, June 7	, 1888.		
MAE	RK9.	SHIPPERS	PACKAGES AND CONTE	NTS.	VLLON8	VALUE
C.W			5 half barrels Wine. 5 half barrels Brandy		239 139	8 1 3-
W		Dre-el&Po .	3 barrels Wine,		1. 5	,
X		**	G barrels Wine		375 1,258	2: 5
М У Со		r Shall are button	1 barrels Wine 100 barrels Wine 100 barrels Wine 12 barrels Wine 1 barrel Wine		198 1.722	1,89
C		A Capitero	3 barrels W ne		111	3
m mamend . S.B		S La lan n & Co	11 barrels Wine		596 50	2
in diamond .			12 barrels Wine 1 barrel Wine 2 half barrels Wine 6 barrels Wine 12 burles Wine 25 barrels Wine 60 barrels Wine	11 11	103	,
in diamond		**	6 barrels Wine		2505	18
A		tachman & Jacobi	25 barrels Wine		$\frac{59}{1,297}$	- 36
V Со D & п		tachman & Jacobi C Schilling & Co B Dreyfus & Co			2,833 1,800	1,13
			100 ba re's Wine 10 barrels Brandy		.,	-,
**		**	59 half-barrels Brandy 25 packages Brandy		2,085	1,2
G M & Co		Kohl r & Frohling	25 packages Brandy 25 cases Wine 3 panel cons Wine 50 barrels Wine, 3 tarrels Brondy 30 barrels Win.		175)	10
in diamond		11	50 barrels Wine,	2	592 (146	1,5
В		Carpy & Co	30 barrel, Will		1,176	131
A		**	18 barrels Wine		890	13
F		14	10 barrels Wine		9 553	1,0
B&S		11	50 barrels Wine 25 barrels Wine		$\frac{2,456}{1,220}$	1,0
		**	25 barrels Wine		1,220	4
Total an Total an	nount of Wine, 2 rount of Brandy	5 c ses and		:	31,056 2,370	\$13,2 1,8
			AL AMERICA.			
- · · · · · · ·						8 -
B. Puntas Are	nas	Montealegre	2 barre s Wine	0.01	70	٠,
R, Puntas Are & A S, Champ C M, Acajutla	nas	Montcalegre Eng de Sabla & Ca John T Wright	40 cases Wine		30	1
B, Puntas Are & A S, Champ C M, Acajutla P, Acajutla A L L, Acajut	nas	Montealegre Eng de Sabla & Ca John T Wright	2 barre's Wine 40 cases Wine 3 kegs Wine 6 halt-barrels Wine 10 demirohns Wine		30	1
A Du, Adajat	10.		2 half-barrels Wine		30	1
R, Guatemala		Hellman Bros & Co	2 half-barrels Wine 6 cases Whiskey		30 15 40 50	1
R, Guatemala		Hellman Bros & Co	2 half-barrels Wine		30	\$3
R, Guatemala Total an Total an	nount of W ne. 4	Hellman Bros & Co O cases and y G cases and TO I	2 half-barrels Wine		30 15 40 50 340	\$3
R, Guatemala Total an Total an	nount of W ne. 1 nount of Whiske	Hellman Bros & Co O cases and TO 1	2 half-barrets Wine in cases Whiskey PANAMA. 110 kegs Wine		30 15 10 50 310	88
R, Guatemala Total an Total an	nount of W ne. 1 nount of Whiske	Hellman Bros & Co O cases and TO 1	2 half-barrels Wine		30 15 10 50 310	\$33 \$3
R, Guatemala Total an Total an Total an	nount of Who, i nount of Whiske	Hellman Brook Co O cases and TO 1 LEF Instruct	2 half-barrets Wine 10 cases Whiskey 2 ANAMA. 110 kees Wine ER SAN JOSE, JUNI EW YORK.	E (5th	30 15 10 50 310	\$33 \$3
R, Guatemala Total an Total an F & Co	nount of W ne. 4 nount of Whiske	Hellman Brook Co O cases and TO I LEF Lestreid TO NE Lactman & Jacobi	2 half-barrels Wine G cases Whiskey 2 ANAMA. 110 kegs Wine ER SAN JOSE, JUNI 2W YORK.	1 E (5th	30 15 10 50 310	\$13 \$3
R, Guatemala Total an	acunt of W ne. 1 acunt of Whiske	Hellman Brook Co O cases and TO 1 LEF Instruct	2 half-barrels Wine G cases Whiskey 2 ANAMA. 110 kegs Wine ER SAN JOSE, JUNI 2W YORK.	1 E (5th	30 15 40 50 310 50 , 188 768 1,025 1,276	\$3 \$3 \$3 \$3
R, Guatemala Total an Total an Total an PER 1 V. in d a mond in diamond V B in diamond V B in diamond	acunt of W ne. 1 acunt of Whiske	Hellman Brook Co O cases and TO I LEF Lestreid TO NE Lachman & Jacobi	2 half-barrels Wine O cases Whiskey PANAMA. 110 kees Wine ER SAN JOSE, JUNI 2W YORK. 15 barrels Wine 29 barrels Wine 30 barrels Wine 20 barrels Wine 20 barrels Wine	E 15th	30 15 40 50 310 50 , 188 769 1,025 1,276 1,523 1,523	\$33 \$3 \$3 \$3 \$5
R, Guatemala Total an Total an Total an PER f	acount of W pc. 1 count of Whiske	Hellman Bross & Co O cases and TO I LEF Lestretd TO NE Lachman & Jacobi	2 half-barrels Wine it cases Whiskey PANAMA. 110 kegs Wine ER SAN JOSE, JUNI 2W YORK. 15 barrels Wine 29 barrels Wine 30 barrels Wine 30 barrels Wine 20 barrels Wine	::::::::::::::::::::::::::::::::::::::	30 15 40 50 310 310 50 , 188 768 1,025 1,276 1,528	\$33
R, Guatemala Total an Total an Total an PER f V	acount of W pc. 1 bount of Whiske	Hellman Bross & Co O cases and Y if cases and TO I LEF Lestretd TO NE Lachman & Jacobi C Schilling & Co	2 half-barrels Wine 16 cases Whiskey 22 NAMA. 110 kegs Wine ER SAN JOSE, JUNI 22 W YORK. 15 barrels Wine 25 barrels Wine 25 barrels Wine 26 barrels Wine 27 barrels Wine 28 barrels Wine 29 barrels Wine 20 barrels Wine 21 barrels Wine 22 barrels Wine 23 barrels Wine 240 barrels Wine 25 barrels Wine 26 barrels Wine 27 barrels Wine 28 barrels Wine 29 barrels Wine	E (5th	30 15 10 50 310 50 310 50 , 188 769 1,025 1,276 1,623 1,043 1,518 9,824	\$33 \$33 \$5 \$3,59
R, Guatemala Total an Total an Total an Total an B & Co. PER V. in d amond in diamond b. W B in diamond B. A K V Co. B & Son C & Co.	nount of W ne. 4 nount of Whiske	Hellman Bros & Co O cases and TO I LEF Lestred TO NE Lachman & Jacobi C Schilling & Co Cal Transfer Co	2 half-barrels Wine it cases Whiskey 2 NAMA. 110 kegs Wine ER SAN JOSE, JUNI EW YORK. 15 barrels Wine 20 barrels Wine 30 barrels Wine 30 barrels Wine 50 barrels Wine 50 barrels Wine 50 barrels Wine 50 barrels Wine 60 barrels Wine 60 barrels Wine 60 barrels Wine	2 t5th	30 15 10 310 310 50 , 188 769 1,025 1,283 1,518 9,824 9,824	\$33 \$33 \$33 \$33 \$33 \$34 \$34 \$34 \$34 \$35 \$35 \$35 \$35 \$35 \$35 \$35 \$35 \$35 \$35
R, Guatemala Total an Total an Total an Total an B & Co. PER V. in d amond in diamond b. W B in diamond B. A K V Co. B & Son C & Co.	nount of W ne. 4 nount of Whiske	Hellman Bros & Co O cases and TO I LEF Lestred TO NE Lachman & Jacobi C Schilling & Co Cal Transfer Co	2 half-barrels Wine it cases Whiskey 2 NAMA. 110 kegs Wine ER SAN JOSE, JUNI EW YORK. 15 barrels Wine 20 barrels Wine 30 barrels Wine 30 barrels Wine 50 barrels Wine 50 barrels Wine 50 barrels Wine 60 barrels Wine 60 barrels Wine 60 barrels Wine	2 t5th	30 15 40 50 310 310 50 310 50 1,025 1,025 1,528 1,528 1,518 9,824 2,250 1,256 1,025 1,283	\$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$
R, Guatemala Total an	nount of W ne. 4 nount of Whiske	Hellman Bros & Co O cases and TO I LEF Lestred TO NE Lachman & Jacobi C Schilling & Co Cal Transfer Co	2 half-barrels Wine it cases Whiskey 2 NAMA. 110 kegs Wine ER SAN JOSE, JUNI EW YORK. 15 barrels Wine 20 barrels Wine 30 barrels Wine 30 barrels Wine 50 barrels Wine 50 barrels Wine 50 barrels Wine 60 barrels Wine 60 barrels Wine 60 barrels Wine	2 t5th	50 50 50 50 50 50 50 50	\$3 \$3 \$3 \$4 \$3 \$5 \$6 \$5,8 \$6
R, Guatemala Total an	nount of W ne. 4 nount of Whiske	Hellman Bros & Co O cases and TO I LEF Lestred TO NE Lachman & Jacobi C Schilling & Co Cal Transfer Co	2 half-barrels Wine it cases Whiskey 2 NAMA. 110 kegs Wine ER SAN JOSE, JUNI EW YORK. 15 barrels Wine 20 barrels Wine 30 barrels Wine 30 barrels Wine 50 barrels Wine 50 barrels Wine 50 barrels Wine 60 barrels Wine 60 barrels Wine 60 barrels Wine	2 t5th	769 1, 188 769 1,025 1,276 1,276 1,283 1,283 1,283 1,248 9,824 9,824 9,824 1,256 10,650 5,120 5,120 1,253 10,650 5,120	\$0 \$0 \$3 \$3 \$3 \$5 \$3,9 \$2,0 \$1
R, Guatemala Total an	nount of W ne. 4 nount of Whiske	Hellman Bros & Co O cases and TO I LEF Lestred TO NE Lachman & Jacobi C Schilling & Co Cal Transfer Co	2 half-barrels Wine it cases Whiskey 2 NAMA. 110 kegs Wine ER SAN JOSE, JUNI EW YORK. 15 barrels Wine 20 barrels Wine 30 barrels Wine 30 barrels Wine 50 barrels Wine 50 barrels Wine 50 barrels Wine 60 barrels Wine 60 barrels Wine 60 barrels Wine	2 t5th	50 50 50 50 50 50 50 50	\$0 \$0 \$3 \$3 \$3 \$5 \$3,9 \$2,0 \$1
V. Total an	nount of W ne, 4 nount of Whiske	Hellman Bros & Co O cases and TO I LEF Lestred TO NE Lachman & Jacobi C Schilling & Co Cal Transfer Co	2 half-barrels Wine it cases Whiskey 2 NAMA. 110 kegs Wine ER SAN JOSE, JUNI EW YORK. 15 barrels Wine 20 barrels Wine 30 barrels Wine 30 barrels Wine 50 barrels Wine 50 barrels Wine 50 barrels Wine 60 barrels Wine 60 barrels Wine 60 barrels Wine	2 t5th	50 50 50 50 50 50 50 50	\$2 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$4 \$5 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2
V. Total an	nount of W ne. 4 nount of Whiske	Hellman Bros & Co O cases and TO I LEF Lestred TO NE Lachman & Jacobi C Schilling & Co Cal Transfer Co	2 half-barrels Wine 16 cases Whiskey 22 NAMA. 110 kegs Wine ER SAN JOSE, JUNI 22 W YORK. 15 barrels Wine 25 barrels Wine 25 barrels Wine 26 barrels Wine 27 barrels Wine 28 barrels Wine 29 barrels Wine 20 barrels Wine 21 barrels Wine 22 barrels Wine 23 barrels Wine 240 barrels Wine 25 barrels Wine 26 barrels Wine 27 barrels Wine 28 barrels Wine 29 barrels Wine	= :5th	50 50 50 50 50 50 50 50	\$00 80 80 80 80 80 80 80 80 80 80 80 80 8

TO CENTRAL AMERICA.

Cal Transfer Co.....

T dal amount of Wine, 31 cases and Total amount of Whiskey, 24 cases and Total amount of Brandy....

A L & Co, Corinto...
R & A, Oers
R & A R, Corinto
D B, Amapala...

A P. Mazatlan... T
J O V. Mazatlan J
C G... A
G. San Benito I
M C. San Benito Y
D C. Mazzanilla G & V. Manzanilla I

C H, San Juan del Sur | B D evfox & Co. | 7 kegs Wine | 3 half-barre's Wine | 3 half-barre's Wine | 6 kegs Wine | 1 keg Wine | 1 keg Wine | 1 keg Wine | 24 cases Wine | 24 cases Wine | 24 cases Wine | 24 cases Wine | 1 king Wine | 24 cases Wine | 1 karrel Wine | 1 karrel Wine | 1 ker Wine | 1 ker Wine | 1 ker Wine | 1

John T Wright. 12 cases Whiskey.

Log de Sabla & Co. 12 cases Whiskey.

12 cases Whiskey. 12 cases Whiskey. 12 cases Whiskey. 13 cases Whiskey. 14 cases Whiskey. 15 cases Whiskey. 16 cases Whiskey. 17 cases Whiskey. 18 cases Whiskey. 18 cases Whiskey. 18 cases Whiskey. 19 cases Whi

TO MEXICO.

TO STEARCY.

J H Dieckbran. | 2 kegs Wine.
W Loa za. | 1 halecask Wine.
4 casks Wine.
4 casks Wine.
4 cases Whiskey.
| 2 kegs Wine.
| 4 cases Whiskey.
| 5 kegs Wine.
| 6 kegs Wine.
| 1 tiundla h k t'o. | 3 tarreb Wine.
| 1 tiundla h k t'o. | 2 barreb Wine.
| 2 barreb Wine.
| 3 karseb Wine.
| 3 kegs Wine.
| 3 kegs Wine.
| 3 kegs Wine.
| 3 kegs Wine.
| 4 kegs Wine.
| 5 kegs Wine.
| 6 kegs Wine.
| 7 kegs Wine.
| 8 kegs Wine.
| 8 kegs Wine.
| 9 kegs Wine.
| 1 keg Wine.

			,		
	R A W		1 harrel Wine	51	
	W 8 D		I barrel Wine	45	
	J G		1 barrel Wine		
		C Carpy & Co	50 harrels Wine		
	6 M		25 barrels Wine		
	LP		26 barrels Wine		
	C in dlamond		200 barrels Wine		
.	F B & S	* * * *	27 barrels Wine		
3	A.C	***	30 barrels Wine		
5	S & Bros		50 barrels Wine		
۲.	G B	* * * *	30 burrels Wine		
,	A A		29 barrels Wine		
í	1 C 5 Co		1 hulf-barrel Brandy		
i	L C & Co E B & J				
'n	DMK&to				
1	K & F				
,	J W & 8		52 barrels W ne.		96
3	AT Co	C Sobilling & Co.			3,14
1	11	c semining a co	160 barrels Wine		
3	В D & Co	B Drevfus & Co	750 harrels Wine		
5	K & F				
ż	**	i i i i i i i i i i i i i i i i i i i	100 barrels Wine		
7	J A S		150 half-barrels Brandy	1.309	
ì	G	J Gunglach & Co	300 barrels Wisc	14,188	
2	CS	Charles Stem	. 62 puncheons Wine	9,300	3,720
	CI CI		50 barrels Wine	2,500	1,000
	C	S Lachman & Co	. 600 barrels Wine	}	
0	**	**	75 half barrels W.ne		
ò	**	14	400 cases Wine		600
_		100		24045	200.200
Š					
il	Total amount of B-a	поу		1 3,000	7 2,01
ß		MIRGELLANDOL	TO CHILDSONIES		
2		MISCELLANEOU	S SHILDENIS.		
1					
,	DESTINATION,	\ F887I	RIG	OALLONS.	VALUE.
2					
•			-		
١.		Mexico		639	
í		ity of Pekin		1,054	49
•		Brusecls		980	40
	B. lgium		B rk	1,265	62
			Brig,	1.572	61
		Alameda	Steamer	1.639	1,03
,	Africa	2	Steamer	49 258	5
ī			Steamer S eamer	258	20
ż	G-valulu	City of Sydney	Barkentine	90	- ~
1	Honolulu	insrovery		30	
1	rotal			7,471	
ζ.	Total shipments by Page	ima steamers	40,91	2 irallous 6	19,537
	Total Miscellaneous ship	ments	271.8	is "	09.762
3	rom. anacenaneous amp	dicines			,
<	Grand totals		312.78	8 81	29,299

TO NEW YORK-PER SHIP LUCILE, JUNE 12, 1888,

Fairbanks' Standard Scales



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Our Wagon and Platform Scales are used by all prominent Vineyardists and Fruit Growers.

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SAN FRANCISCO, CAL.

ANTHRACYOSE

Extracts from U.S. Botonical Division Bulletin No. 2

BY P. L. SCHIRSER, P. L.

attacks from the biginning of spring vigos of a more gineral application must be ation until the close of the greating seas sought. ion, and while very abundant, the digray priors as its out non the fruit.

Extractly to the That the external characters of Authorities are determined orles. Much mischief to the vine may be by the growth of a spicial fungis has been done before this exposure of the mye hum I an instrated by reported into additions or hoots and berro s.

Onto strats. Ther first appear minute n size, clongating in the direction of strice the bark the cutral portion becomes n a grayish has. The back is finally bith.

he latter are not directly attacked

On the berries - So far as my own obsereffect upon the fruit. . There is a small spot, grayish in the cent r, whire the cuticle of the berry has been distroyed, with a dark brown bonder. Pr vious to entire spot is of a doop brown color.

These spots chlarge, isturing a nore or less regular, rounded outline, and between tive the light colored central portion and the lark bord r fine, there is developed a well defined band of bright vermillion finally inder the action of the lisease, the ber is ing, apparently, but the skin and the eristic of the disease are retained.

growth of the berry.

his parasite.

or the diffusion and propagation of the found by chance, will, say the Irish, keep afterwards neglect the two urst, but must way - Fx

ing the half-grown banches of grapes in more children, $\forall S$ on to the solution

The spherel margress very it in the more valuable than our

which there is night result in marry to out of the old covity. Folk has in fit? action of the fungus proceeds with cities on them or not. The new growth is there lestruction of the young leaves, ev a when solded one third to one half its bulk or powdered lime. If the progress of the disease is not checked by this tradment the cations are concerned, the severity of the sulphur is control in the subsequent applilisease has been especially manifest in its cation, which are of finely pulverized lime,

Where this treatment of the vines with sulph its of iron, followed by frequent and heavy use of sulphur and sulphur and time, has been adhered to for several years. the bursting or rupturing of the outed the Authoraenose new turbly appears, or has ceased to be injurious, even in locations where before it was exceedingly destruc-

SUPERSTITIONS CONCERNING T13.111

The teeth and the aches to which they begin to wither and dry up, leaving a the give rise, have been subjects of many strange obeas among uneducated people seeds. There is no browning of the rise 1 offi have been worshiped, and are still sues of the berry as in the case of blacks were rated as relies in some Catholic shrines I th have been worshiped, and are still rot, nor does the skin shrivel as in that Bortlah's tooth is preserved in a temple in disease, leaving prominent and very irregu. It dra, and Cylonese worshipped the tooth ar ridges, but the circular spots first forms of a menkey, while an elephant's tooth ed are easily seen and the colorings charact and a shark's tooth served a similar purp's among the Malabar Islanders and the A berry may be at acked upon one sale longar Islanders, respectively. Stations when it is not more than half grown, it valued a monkey's tooth so highly that then becomes irregular in shape, the disc they are reported to have offered the cased part making no further develop Portuguese 700,000 clowns tir it. There ment, and it sometimes happens that this was a tradition that, from the time those side cracks open, exposing the weeds, which mass, the Person, carried off a proce of the sre gradually forced out by the unequal true cross from Constantinople, the numberefiteth in the mouth of men were re-Remedies. It is certain that this disease clinical from thirty two to twenty three. It prevails most in wet sensons and in how is needless to say that we still have thirty. situations, or upon poorly drained land, two. Teeth have often been worn as a wolf's tooth, worn in a bag about the As with the Peronespora or Howny mil- mock, would chase fear away from the lew, water in condensed form is necessary possessor. The back tooth of a horse, the Virgin, and the new moon. You may well bear in path, and trum in the old

disease, and any appliance that shall pre- year supplied with money. There is knowned say five prayers on first beholdwint the deposition of ramer dow upon many omers connected with infinits teeth, ling the new men. The two jew bones of the foliage, or other parts of the vine, will as well as those of chilts. If a child tethe a haddock have been powerful in allowing sourcemmunity from the disease. Inches carry, it is thought, in England to product the tooth a heavy range the miracle of the Authraches, like the blacketet is an ill major bags will doubtless be as as ful profits the adag to them that a city and reby a manufacturized, the habit of which, bection of the barries against Authraches. Sweden. If a to the mass first on it. nowever, is radically differed from the as from blockerst and for the same real upper joints, on the contrary to soon lungus of that disease, is are aso the existens. This system of vine protection, exist of early death, as the chief entance server ernal chang's which it induces. All the cept for the borries, is hardly practically so potent a disaster. An old work, pubgreen parts of the vars are subject to its in vineyards of any size, and other modes, lished in 1933, tells us that to its act other or an eye is also to hose, some frauder kitosinan, or is, at beist attended by sone illink. He who has his teeth wife quit pecasion d to the young she its is quite as surface, and as soon as it bursts through its there said to be attend 1 by 2 od look the epidernas it is pricheally exposed in Breton methers will not touch infacts of parts to the direct a from of the fungs gums, lest the to the grown crooked - 1. do an of teeth was a warning of some disaster, unless you dramed they for and speres tikes place and, consequently. The pere lof to chang boing to anyons owings of the fungues sports upon heightly here as also where, provintion is wastly one in childhood, it is extremely and at a t to have it over with. In Sasson, Englishing In districts in Europe subject to this disson necklade of bends made from peoply to t. rown spots, a little dipress I in the mid-lease, the practice is quite generally follows placed on the child's neck to esset increar less repary to the vines. the with a slightly rais d, darkers dored lowed of batting or washing the vines, in this operation, in Longer backets as im or bord of These spots seen more is early spring, b for the birts have a mediate thought powerful. It is also suith it in need to $+\tau_1$ and, with a strong solution; first to the most be the own +w , which they 50 percent of sulphate of iron, applied fall out, for if any animal, it such a tro nore evil unity dipress dand usually takes with an ordinary mope or a large spong, play the next tooth which have that if fixed to the end of a stick 2 or 3 feet long, the animal finding the old one. In N va lestrived, in Lim sivere cases, the wordy. This washing should be dire when the Soma and in some parts of the United issues beneath appear as at borned or core atmosphere is draip, or order to prevent a States, children are told that the new to the oded, so doply sometimes as to reach the two regard examination of the reac solution, will be a gold one of the target as keep The appearance and action upon the the vine. When the young shorts have odd notions about the to thach, and now y caves is similar to that upon the stans, attained a leight of 5 or 6 inches they red power randles are current for 2. It was and it is certainly very evil at that where coive a good dusting with the flower of one thought to be caused by a worm. One he diseased spits are numerous, and the (suphur, whether the disease has appeared) of the most potentiam diseases thought to be a charm of some kind or other erruption, both shoots and leaves must carefully watched, and at the first sign of England this charm is a rhyme of pager succumb to the parisite. The intensity of the inabidy they are again to ited, this printen on a piece of pop r. A is sef r the disease upon the shorts may cause the time with sulphur, to which has been this purpose are current in Garatty to this day. St Appolicus was especie y n yoked for this imala y in the thur enth century. A work publish d in 1525 pre-Scriboles, the fellowing remody. The patient was to initiale the senske from a vessel in which dried herbs were may dewith live cools. He must then breath ever a cup holding water mixed with wax and serum when it was said that a worm, the cause of the trouble, would appear in the cup. Nearly a contury later we find another strange remedy ... "With an ir in had raise and cut the gum from about the tooth until it blood, and that some of the blood spill upon the mail. Then drive it into a wood en beam up to the head. Atter this is done you never shall have the to thache in all your life." Another old writer of the same period, Aubr y, gives popular remedies for the teeth iche. A splinter of wood from a gibbet was thought efflorerous, in the north of England, while in D von-demand on the root, an shire it was thought best to bite a teath that you negate the root. from a skull in a grave yard, and corry it in the pocket as a charm. In another fiverth. Kinden System of training the part of England, an equally ghastly in not view for white it has the advantage of a live mole or a double nut were also pro- a few years are useless, because the sap scribed as preventive charms. It tress will regard to the arms upon the apper the left foot and leg l for the left is vines in leleptive the lewer ones of nutricually effective. Some of the Irish, are some at and thus fail. Again, the main trank for the toothache were to by as glassey a who, in spite of all that man can de, eleg these cited above. One of this empty, a middle up so that the sap can no longer recipes bids you go to a gray. Even apply are itenlate freely, the same as in every other it, say three paters and three ives for the except the renewal system." These objection of the dead, then hew errellfat of tens seem to be conclusive against the Too high manuring, especially with fresh annihits. Shark's to the green this purpose grass taken from the green's 200 for an existence unless it shad be undertally mediang, seems to favor the development of in Somon. It was formerly thought that The to that he will never after the destruction, and anti-anti-some other method of trainyour hair on a Friday, invoking the Creater cour region had better follow in the present

aves and tishes. If you wish to avoid the teath iche, say the sons of Erin, never shave on Sunday. A chyst.

- - -FASTERN GRAPE GROWING NOTES.

P maked is the grape grower whose on the poor. Better work for your neighforing vin yardist, by the day or month, and at it. brite wages, than undertake to almy it a find on which you cannot expect with a reasonable degree of certainty, to grow a profitable crops.

See that stakes and trellises are sufher any strong to support the vines when in full leaf and fruit. To have them break lown in a show r and heavy wind is a inisterture, and clab mous policie straighten th mount again, and always attended with

On questro to troubags, made of specialsymptomical paper with reproof and practiady indistructible -- xer shown by President A. W. Pearson to the members of the S. J. State Hortonitural Society, at the list meeting in fronten. They are manufactored by a firm in Philadelphia.

Mr. I speniaub, one of the most extensive and su cossful vineyardists in Kansas, gives his rule for pruning grape vines as follows . Trum away from a three-year-old vine in good condition all but twelve feet of new wood, divided among the different branches, and train the arms of the vine as much as possible in a fan-shape on the trellis. Give older and stronger vines more wood, weaker ones less?

New Handship has a graps vine covering in arty one-fourth acro of overhead trelas, that has produced twelve hundred pounds of frature a season. The Orehard in I work a publishes this item, and were if not for the excellent reputation of that admirably inducted journal, we should melins to think the story might properly be trimused down a little. It is a big one to half from s. for north among the granite

A Mr. Caywood recently said, and we think very reasonably too, that if we sumnor prune overvother vine in the row, we with not repeat it next year. His experithe has been that summer-prinning is contrary to mature. It frustrates every natural principle of growth. He rubs off all the shots hole a not want to produce fruit. His theory is that the end of the vine is the shound on the root, and if you cut it off,

1) S. Marvin, of Watertown, does not was a rooth drawn from the mouth for long cases with the old wood of the arms, corpse, carried in the pocket. The previous it has two great defects. Its lower arms in Another remedy is to you rever to mile ingli-made known, the grape growers of

HOOF ROT IN VINES

Said a prominent viticulturist to a Chroniche reporter bast week: "A fungus disease has been prevailing to a very large extent in many vineyards during the last few years but only lately has it been observed. It is doing the most damage near Cloverdale, in the Sonoica district, and mar St Helena. in Napa valley. The disease is called pourridis, and it affects the roots of the vines, causing them to rot and producwhat is commonly called among vineyardists 'root rot.' This disease should not be confounded with black rot as is frequently done. The only similarity is in the sound of the names.

The malady is one known for years in Europe, and it has affected fruit trees and those of the forest. The parts principally attacked are the southern part of France and Austria and the Maditerranean conntries

A vine when affected shows general signs of enfeeblement, producing sometimes additional force, but this is only tempo ary, for it is followed with a meager production of foliage and by the rotten condition of the root, which, on being exhibited, is brown in color and saturated with water to such an extent as to show the water very plainly when it is cut. The trunk of the vine remains healthy for some time. The general appearance of the vine is that of one attacked with phylloxera. The plants sometimes continue to thrive only from 15 to 18 months, and where the conditions are most favorable to the development of the disease they even die in six months. The disease spreads in a short time over large areas. Favorable conditions are generally produced by excessive humidity in the soil and in an imperviable subsoil which forms a subterranean basin where the water becomes stagnant, a condition favorable to the introduction of the disease. The fungas which is responsible for the following disease may be introduced on the vines or even on some vegetables and on trees.

The new tibers of a vine may show up signs of an attack, but the old roots will show swellings which even break through and protrude from the bark with a pithy growth which soon dies and rots. Before long the whole substance of the root decays to such an extent that the vine, which is far gone, may be pulled out of the soil with difficulty.

One can only hope to so modify the conditions of the soil as to prevent the further spread of the disease and to distroy the vines on which it exists. These should be pulled up and turned on the place, so as to avoid any diffusion of the spores, which would be produced in transferring the debris. Follow this with a complete drainage and working up of the ground, and if possible leave it unplanted for several years, after which, if the excessive moisture has been provided for by proper drainage, vines may be again planted in the same spot."

"A sample of this disease," said Viticalturnl Officer J. H. Wheeler, when asked concerning the matter, " has just been exhibited at the Viticultural Commission office. It came from a well-known vineyard near St. Helena. Lately many other cases of the same disease have been reported. It has been just identified here in California. This disease, if I might add to what you already have, cannot flourish on well-drained and well-cultivated soil. The damage is probably great, but cannot be at present estimated, owing to the fact that but few vineyardists know its characteris

ties. By the way, there has been an unusual number of complaints of the increased dimages to vineyards by the phylloxera, Considerable abarm is being felt for its effect on the coming crop."

VIGNEROAS IN COUNCIL.

The wine interests of Santa Clara county were discussed at the late meeting of the Viticultural Society. Mr. Lees said that he did not think it is the real army worm which is here found, as that is a small worm. This one is another worm, more of the moth variety, or a kind of sphinx. They come in large quantities, but he considered them only a passing evil. They are found all over California, especially this year, and have been seen in this county before. Wherever a bit of waste land or vegetation is found they multiply in large numbers, but they have found their owo enemies in numerous parasites, and in time will dis-

Captain Merithew said that there are now in the valley three quarters of a million gallons of wine, which the owners have offered for twenty cents a gallon, but which is left unsold. There is one difficulty in making wine in such large quantities, such as a hundred or a hundred and fifty thou sand gallons, that there are so many buyers in San Francisco who work against it, and by superior opportunities are enabled to sell their wine whether in large or small quantities much quicker, and the growers are forced to full back on them for a sale at

Said Mr. Coomb: "I will say this for those who have taken interest in noting the condition of the grape growers during successive sensons, that they see how necessary it is to have great storage capacity. In Napa, they are independent, and can wait until the next season if necessary. If we had here more wine making establishments to handle our own crop, the San Francisco merchants would have to bid immediately the full value of the wine, instead of waiting until the last moment to buy, resting on the fact that the growers will have to sell, It seems strange, considering that so great a return has been given to wine enterprises in the past, that capitalists are not willing to invest more than they do. All of our institutions the past year have made from twenty-five to forty per cent. Capitalists can arrange these matters much better than we can ours-lyes because they can handle larger quantities. The northern counties are ahend of us in that their institutions have been established longer.

Captain Merithew added: "We will never be able to arrange these matters until we shall have free importation of brandy to fortify our wines. There is too much red tape about the internal Tevenue business, and it is not systematized perfectly yet. As an instance, I happened to have an order for a package of brandy that I did not have on hand. I went to the bonded warehouse to get it ont, and it is was six weeks before I could do it. The gauger travels all over the State, and it may be two weeks before you have his services. If we didn't bave so many difficulties in the way of making brandy and sweet wine, more of our grapes would go into them, and we could ship it all over the world. These large whisky concerns in the East have the monopoly and can control it to our detriment."

State Inspector of Fruit Pests Klee made n few remarks concerning the phylloxera, and the meeting adjourned,

VINEGAR.

There are good vioegars in the market; there are also those which are indifferent, bad and very bad. The latter are the more common. The best and most wholesome are those made from eider and wine. These retain suggestions of the apples and grapes from which they originally came. If carefully kept they remain palatable for an indefinite period; if carelessly, they, like every good food sobstance, are apt to become wouldy and unwholesome. From a gastronomic standpoint, the best vincent is that which is made from red wine; next to it are those made from 'white wine, elder and perry. The first is invaluable in salad dressing, on account of its beautiful color the second is most oseful in those preparations where no color at all is desired; the third is available for all general use, and the last comes to the front whenever the delicious jargonelle flavor is conducive to the culinary success. Below this first-class are the vinegars made from ale, beer and whiskey. These are coarse, heavy and often offensive. They never, except in the case of whiskey, are made purposely, but represent the desire of some trewer or distiller to utilize goods which have been ruined by careless treatment, and which would otherwise prove a total loss. The ale that sours in the barrels and hogsheads, the beer that begins to putrify in the vaults, and the wretched whiskey which is so full of fuscloils that no dealer, not even the lowest, will purchase it at any price, are the raw materials from which this class of vinegars is made. They cannot be said to be injurious, but they are simply miserable apologies for the real article. In this conntry a mult vioegar is made from mashed malt without distillation, but by simply allowing the sugar fermentation to go to an acetic fermentation. It may also be stated that there is nothing equal for domestic use to a good cider vinegar. Below the grade of whiskey vinegar are the vinegars made in the laboratory by chemical processes, and especially by the destructive distillation of wood. Unless skillfully refined and purified they contain creosote, wood tar and other products of the same class, all of which are injurious, many of which are poisonous, and some of which are fatal to the user. They have one advantage, and only one-they are cheap, They bear the same relation to genuine vinegar that myrbane oil does to bitter almonds, glucose to pure angar, sweetened dilute oil of vitrol to lemonade, and lard oleomargarine to resh creamery butter .-British Journal of Catering.

PROFITS OF WINE MAKING.

A correspondent of the Contra Costa Gazette says: Since the proposition to establish a winery here in Martinez has taken definite shape by appointing a committee to prepare articles of incorporation, there seems to be a very general interest in the enterprise, and I am frequently asked if it will pay as an investment to others than those directly engaged in grape growing, My answer has invariably been that there has not been a winery in the State conducted on average business principles, and such knowledge of the business as is required by any other class of manufacturing, that has not made money, and my judgment is that there is no business at this time that offers a safer and more legitimate investment of capital than wine making. Here in heat the sixty railroad stations along the Martinez we are especially favored for such | road.

an enterprise. We have the most favorable climate to be found in California for wine making and wine maturing. We have the best shipping facilities; we have the most favorable location for receiving and working up the grape crop of the great San Joaquiu Valley, and I believe it will be found that the grapes grown in the San Joaquin Valley will all have to come to the vicinity of the Straits of Carquin z before they can be made into good wines, and Martinez is the first point reached where the combined favorable climate and shipping facilities are found. The organization which we expect to form at this time, will be the nucleus around which will grow one of the largest and I think the most substantial wine making and storing establishments in California, and there is not a farmer or business house or capitalist or mechanic or laborer that will not be benefited or whose interest will not be advanced by helping to establish this enterprise. At the meeting to be held on Friday next, I will be prepared to furnish estimates of cost and prohable profit of such a winery as is proposed to found at this ____

GRAPE NOTES.

The following extract is from the Rural New Yorker:

The new white grape, Roenbeck, is of very fine quality. It is not hardy at the Rural Grounds Berckmans is alive to the last bud. Eaton is not injured. We believe that this variety, as a market grape. at any rate will take a first place among blacks. Amber has been dug np and rejected. Brighton, Wilder and F. B. Hayes uninjured. Empire State is badly hurt in one place, while in another it has passed the winter with little harm. Alice has been injured slightly. Roanoke Neverfall is perfectly hardy. Moore's Early has never been injured. Worden seems hardier than Concord. Lady, unharmed, Victoris, Carlotta and Rockingham are never injured. Pocklington, Early Victor, Cottage, Ulster. Antoinette uninjured. Our opinion of the Empire State, so highly prized by many, is that it is not the bardiest variety in the world

In relation to the Empire State, we agree with the Rural. The one vine of that sort on our place, which last year made a vigorous growth, ripening its wood well, is this spring killed to the ground, though sprouting from the root.

---A Long Bridge.

The bridge across the classic Oxus, on the line of the Rassian Transcaspian Railway, is 1,000 feet longer than the Brooklyn bridge. The entire road is a remarkable piece of engineering. It was considered impossible to maintain a railroad through the shifting sands of the Kara Kum desert. But General Annenkoff, by covering part of his railroad with clay, by placing in his embankment layers of the branches of a desert shrub, and by cultivating along parts of the route many thousands of the desert plants, the roots of which retain the sand, has thus far maintained his roadbed without deterioration. The problem of a water supply was solved by bringing water in pipes from monotains that skirt 200 miles of the route, also by cansls from the Morghab, while artesian wells are the source of supply between Merp and the Oxus. In a region that is destitute of fuel, and where the cold is at times intense, petrolenm has been utilized to drive the locomotive and to

Some or our Southern contemporaries is from the water staelf, since sewage is

per immical for certain personal reasons of danger. American Analyst. th Viticultural Commission, afforded opportunity for criticism which our there neighbors have not been slow to te pp. The Secretary of the Commission dertook the onerous and thankless task compiling a list of the viticulturists in State. In doing so he was totally deudent on the information he could gather mail, from the various districts Natur y a few errors may have crept in, owing the changes which are constantly taking see in ownerships of vineyards, especially ancy. These, however, must be conered trivial, they do not depreciate the ue of the list in a general sense, and do certainly justify such a wholesale denciation, it has pleased our contempores to indulge in.

If an one is to blame it is the vine grower Santa Clara or Riverside, to whom was rusted the task of collecting and wurding a correct list of the vine growin these sections.

Persons who are in a position to criticise cial actions for the public weal, should wer let persona.

d justice that is due to all. er let personal feeling interfere with

fiticulturists who notice any errors in ir particular districts are invited to send ote of them to the Secretary of the Comsion, who will have corrections made in are editions of the directory. By this uns the list will be rendered as perfect as originally desired by the compiler, who to labor against many disadvantages in ecting the original data,

IMPURE 100

end Ice Liable to Contain Disease Germs.

he danger of an impure ice aupply has n the aubject of a very thorough investion by the Masschusetts State Board of Ilth, which attributes many cases of roid fever occuring in cities in Autumn, ad water and the results of bad drainor none at all, in the summer resorts. board, therefore, urges upon people are considering the question where to nd the summer, the importance of cting places which have proper drain-and thre water shortly. In places and pure water supply. In places and pure water suppose of re ponds are made for the purpose of cting water for a supply of ice, it is ost certain to be contaminated with ige, as freezing does not kill but only reals hacteria. A most mysterious case holesale poisoning at a sommer hotel finally traced to the impure ice which been seemed from neighboring shallow da. Upon analysis the melted ice was d to contain in suspension, a large sitity of decomposed vegetable matter organic matter mostly settled at the om of the vessel, but the lighter matter sined diffused through the water. The the source of supply, was examined found ataguant, and at one end a seent mass omitted an intolerably esive odor. It was reasonably sup if that the ice was the cause of the cess, and upon its disase the spidemic red. Prof. Rainback Parameter at d. Prof. Raphael Pumpelly, who investigations for the National Board ealth, has no doubt that ice can carry disease that the water from which it Dzen, can convey, and that there is more danger from the ice than there

e lost, if they cannot find something to more easily decomposed in sommer than owl about, especially if the cause of com- in winter. While in cities the greater part aint exists north of what they are pleased of the ice received is pure, in towns where the supply is taken from shallow ponds, Some exception taken by a Northern both the water and the ice may be a source

THEBLI'S RAKE WINES

New Yoak, April 17. The catalogue of Samuel J. Tilden's wines was sent to-day to a number of wealthy connoissenrs. The cellar is estimated to be worth \$20,000. In the list are five cases of Johannisberger, blue scal of 1865, which, when obtainable,

There is also a case of 1862, six bottles Cabinet 1862, bottled in 1865, and five bot- the firm will make an extra effort this year counties where the industry is yet in its task 1870. There are also 300 bottles of to pack and ship only the very most fonts, cor, flav rea style of package. Steinberger, Cabinet Imperial, 1868. One of the finest wines known to the trade and that which goes by the same name sells at fashionable resorts at \$14 a bottle,

Then there is a large case of Grand Vin Chateau Laft ur Monopole of 1574, a c.ese of Chat-au Iquem of 1858, and two cases of Chateau Lafitte of 1864 The Madeiras are exceedingly rare and cannot be secured in the trade. There are 99 bottles, ten being the old reserve of 1817, and one Craw ford of 1826. The liquors include a barrel of Kentucky whiskey, two demijohns of Bourbon, fifteen bottles of rye, twelve of brandy, ten jugs of Schiedam and two buttles of cider-brandy.

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Vir. , for the resigns of life around on the conservation is started as t = t + t. for almost (β, i, i, j, y) in . Some idea of what the first parts to compash in the way trap of this said in may be goined from the rather cas Rayners Drockshot said street with Moods A Conto mail I scored

A stable a three son A stable a Made A Corpress to I to viting grades of rushes, off or my days of importation with the or park. It is every prospect of son old its has the case Monde wile just up trains that the foreign

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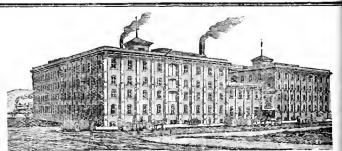
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VINE HOPPERS.

This pest has become troublesome in some vineyards, especially so where there are young plants, Mr. S W Kilpstrick, who is in charge of Henry Miller's extensive orchards and vineyards in this section, assures us that a very simple, inexpensive and efficient remedy can be found in the use of concentrated lve. Mr Kilpatrick recommends that two small cans of concentrated lye be dissolved thoroughly in one barrel (40 gallons) of water and this mix ture sprayed upon the leaves and stalks of the vines, care being taken that the spraying shall be done so lightly as not to break off or injure the foliage by its force. The work should be done before suurise or some time after suuset. By placing the barrel upon a light hand-cart it would be an easy matter to spray many acres in a few hours and at a very inconsiderable expense.

Another formula suggested by Mr. Kilpatrick, but which he does not recommend so strongly as the foregoing, is to dissolve one pound of sulphur in three gallons of milk taken from the fire at the boiling point; mix with this two quarts of kerosene, stir the whole thoroughly in one barrel (40 gallons) of water, spray with the mixture in the same manner as recommended with the concentrated lye, -- Gilroy tracette

VINE-GROWERS in the Livermore Valley, the Herald says, are introducing a weed cutter which saves a great deal of labor. and does very effectual work. The cutter is a steel knife, which passes along between the rows two or three inches below the surface of the ground, and cuts out the weeds. This knife is usually bolted to a piece of scautling, on a level of 15 degrees. It may be attached to the rear of a cultivator or a clodmasher, or set in a light framework. It is a cheap and valuable tool, and some of the growers buy a piece of steel and make it thems lyes,

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The wine being freed of all disturbing elements, it promotes its perfect develop-ment of color and bouquet, of natural strength and aroma.

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It calms and regulates the second fermentation of young wines.

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it strougtheus and developes their natural color and aroma, preparing and assisting them for thorough clarification, promoting their developement and improvement in quality and aroma, and riproint them for

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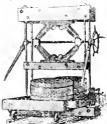
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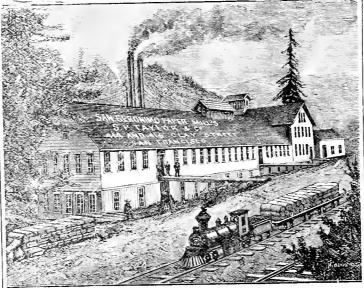
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VOL. XX, NO. 7

SAN FRANCISCO, JULY 6, 1888.

PRICE 15 CENTS

WINE.

CONNECTION WITH THE TEMPERANCE PROBLEM.

Writing in Pomercy's Advance Thought, E. W. De Knight says

Contemplating the wine interests of the inited States, it appears surprising when be fact becomes apparent that so large a portion of our pupulation care so hitle to nquire into a matter involving such importance, fearing that by so doing auffacuces vil to themselves may follow. The result s that this great majority remain in entire guorance of the subject, a condition the outgrowth, it may be safely asserted, of the oniewhat brised, il iberal teaching of the idvocates of proinfation, who, knowing nothing of the virtues of pure wine, speak of its evils only and condomn it along with shiskey and oth r strong alcoholic drinks is a curse to man and a burd-n upon so-

It may be well to remark here that no lesire whatever is coveted to assume a stand in contraposition to temperance, or to wage any attack upon its doctrines and principles. The object of the views about o he inscribed is to increase rather than liminish the fruits of temperance, and to nggest what seems to be a most plausible olution to the problem and aid to the cause. No disrespect is intended, therefore, n referring to the exponents of prohibition n the manner used above

In the first place, the prohibitionists of his country do great inpury to the work hey have in hand, and much wrong to everal exceedingly worthy interests, by stablishing as a foundation the principle hat all beverages containing alcohol, no natter whether they be fermented or disilled, should be boycotted by the people nd legislated out of existence by the genral government. This is a grievous wrong t evinces a want of liberality on the part f the prohibition element, who, above all, hould be honest and just in their judgments, and not inclined to too hastily brand with the seal of cond-mustion all that which, on first introduction, see me to smack I the had. Generosity in all things is the tandard to be followed. As individuals, road-minded, generous disposition in feel- duct of the vineyard should be levied upon Fermanted wines are of the lighter class,

and things, and especially toward questions in which a lecision is to be attained. No to exerte apoplexy in that directioncause, no reform, nothing ever triumphed stiffying the industry, or that at should be without the observance on the part of the stamped in a manner similar to whiskreformers of a kind, magnatimous spirit in and tobacco, as a luxary only suitable for dealing with all opinions and beliefs, with- taxation and unfit for popular usage out willingly and r spectfully lending the ear to every her and cry borne to it upon difference between light wine and whishes the four winds, and without carefully and understand the virtues of the first a weighing and impartially balancing each (compare t with the latt r, so soon as the argument, every right and every wrong, permit themselv sto investigate the matter It is for this reason that the prohibition and not back away from it as do s a balkworkers and t imperance expounders should herse at sight of a locomotive, so soon be less given to histy cond-minition, and they drive some knowledge of that which more progressive as educators to the good they ignorantly cry out ignast, so soon that follows a life of temperance.

is that represented in the cultivation of the vine for the manufacture of wine, an industrial red an enemy, but of lesser degree than try cone ruing which but little knowledge exists among the people generally, save in California and certain portions of the South-astern States, New York and Ohio. Nor can any one read any conception of promises until by some opportunity or circunistance he be brought into the imm diate presence of one of the wine districts a matter of such moment as the liquor of our own country, such as one finds in question is to determine the distinction be California, the vineyard State

California is a grand country, of exceeding richnes in natural beauty and advantages, and a progressive State of large cities, many people and great wealth, with numerous extensive growing interests, the most characteristic of which is the manufacture of wine, which, if not now, will in the course of a near future evolve into the most important industry and factor in tradeand commerce. The two distinguishing features of California as allied to the commercial world are its fruit raising and wine making. No State can boast of such quaninties and size of fruits, abundance of flowers, clonous climate and buoyant air, lovelier, blue skies, or a people more big-hearted and liberal natured than great one on en tering California

THE CULTIVATION OF THE VINE in California for wine purposes has gradu-

ally grown in recent years to proportious which demand for it not only protection as far as possible by the State, but the most ne of the most desirable and bleased facul- liberal encouragement and protection by es we can be gifted with is a liberal, the government. Not that the pure pro-

ing, thinking and acting toward all people and taxed for the ruising of revenue the obssity of the treasury is now such soon as the people begin to recently will they materially and rather than inpur The most worthy interest which these the temperance movemove. Whisk y a illiberal statements injure and misinterpret the most powerful enemy with which temperance has to contend. Wine is also cen whiskey; but is wine, in fact, an element of intemperance? Lit us see. But here again it is well to tarry and define the meaning of the word wine. As applied by a great majority of persons, it the udes all what the wine interest is, and implies and that intexicates, and everything beading up to dissipation and the bad. The most vita point, therefore, to be reached in treating tween pure light wines and the heavily wines and whiskey. It is upon this point that the solution of the question hings and an offort toward defining which will be made in what is about to follows. from the beginning of history, has been the chief b verage and stimulant of man In certain stages of its manufactor a small libation will into xicate. In this remarks, how v.r. wine is treat doupon ally as it is used as food, and this is the central point aimed at and the chief argament coatmed. By the word tool, there wines are inferr d. Claret, or r. I wine, is the universal drink of lines . G rinary, and every E rop an matten. If this connection it may be as a to resite the points of diff rance between for is and stronger wines, such as sherry, part, some sweet wines and brando's.

Claret and most white win s are the lightest of wines. Claret contains about feren per cent, of alcoh l, sw t wines, twenty-five per cent, or mor , and stronger wines a proportion correspondingly greater

clair in aversames are districted. For in-, clar this producted by firmentation, in the same mainter as beer, ale, etc., the sugar in the Atract d grape juice being tirned into alcohol, which acts as a pre server of wine as it ages. Now, in the case of port and heavy wines, the mode of production is by distillation. The distinction, ther fore, between charet and sherry and nort, and such strong wines, is easily or guizable, the first being fermented and the latter distalled. Sweet wines conoun more also her than to sur wines or Chirch is not stewed, boiled, or canadactur of reto what it is, Whiskey, on be other is stell as a vice embination manufactor of the eigh to process of distillation, and obtains in a closhol than any other spanitus s liquer. Clar t-light red and white win s is simply the pure price of the grape, which, when left alone for a day rtwo, is work I upon by the forces of nature, the saccharine matter being transformed into ale do I, which acts as a fortifir, at leaves the lipter a sour wine. The all hol thus firm I composes not a toth part of the entire body.

By ris not as hadthy a drink as claret. Bor has tendency to bloat. Charet has Dr. Gayot, the French physician, and continuing stimulants of the n ry s, the muscles and digestry functions." I'r Lidwig (rd), the rin who I physiciau on I chamist, in treiting of the points of lift rine I by our I and while wine, remarks that the Northern temperatures man requires in his direk something that qui k us his to of an light in the its circulaion by the hell in its he ited state, such is we find in good wines." In the sense f this i is igraph, the referviit ron this sulpot has abserved eighty not of or Alerican population, how ath in constitution, used a rather than a stimulant, and claret

What show we from is the great problem estating the people of this country. A harm, is do mean lrink that wages in whishey and sir ng a'r helic ir prers, that and had freely, and is within the reach of the por as well as the rich. It is the hard worked halloring man in the United States who stately in such danger of the d men aloh I, it is he who teels the want of somethic a to stimulate his wasted energles, and send a glow of cheerfulness courseach night from his daily toil. There is something be hungers for, something lack-.ug, something needed to rejuvenate him and lighten bis depressed spirits. And how does he attempt to fill this void, to appease this craving, and bring relief to this mulancholy state? By deserting the circle about his heartstone and resorting to the beer garden, or, rather, more often to the whiskev shop.

This is the question which confronts the good people who are seeking to purify and elevate humanity. It is not the wealthy who need assistance so much. The laboring class is the element most to be sought after; and to supply in the natures of these people that which seems to have been crushed out, that which will make them more contented and less inclined to desperate attempts at reaping pleasure which, under such circumstances, too frequently assumes the form of dissipation, is the remedy to be ascertained and applied. If this be the acknowledged condition of sffairs, some factor must be found to destroy this prevailing appetite which sinks men so low; and no passing of laws, no amount of intellectual training, no powers of persuasian will tend more toward creating such a factor, than the dawning and inauguration of the period when the use of light, nodistilled wines will be universal, when their consumption will be encouraged, and when the people perceive the good and the benefits to be derived from such a course. Such a statement may seem bold and rash; but permit the proposition to cool a little and feel how refreshing it is. From what has been previously delineated, it is quite clear that wines of the cluret order are not powerful alcoholic beverages, are not stimulants, and are but the pure, natural product of the grape on being pressed. It has also been demonstrated that the use of such wines deprives one of the appetite for strong, exhilarating, stimulating drinks, by incalcalating in the consumer a natural, steady and continuing buoyant condition. Such wines do not cause intexication -- unless imbibed in quantities measured by the bucket-full-and are not inclined to lend to dissipated habits. Therefore, and finally, the fact remains undisputed that the use of wine as a food, and only as a food and herein is concealed the underlying principle of the whole question-in daily use at the table of every home and family, and especially among the working people, will do more toward shedding sunshine and happiness into the many dark corners marring this busy, throbbing, every-day life about us, more toward enhancing sobriety, by holding away from the companionship of the saloon keeper, the husband and brind of the family; more toward creating kind dispositious, clear heads and good entizens, and more toward advancing the reform of temperance, than to continue in the narrow path now traveled by public opinion, and and to pursue the unjust, fanatical dogmas of the great body of temperance expounders who, without limitation or charity, tirade against, denounce and banish from their presence everything possessing a savor or color of wine. There is no more plausible or rational solution to the temperance question than the proposition herein laid down, for so long as there are brings whose natures have been warped by the queven balancing of the work and recreation, and whose passions and appetites, because of

be unhappiness, misery and drunkenness with which to contend.

AUSTRALIAN ADDICE LEURE

On Wednesday, the 21st lost, a lecture upon the grape vine was delivered in the Technical College Hall, Sydney, by Mr. David A. Crichton, for the Board of Techpical Education. There was a large and attentive audience; and the subject appeared to be a very attractive one. This was the third of a series of lectures upon fruitgrowing delivered by Mr. Crichton, who treated his subject in a thoroughly practical way at the same time making his remarks as interesting as possible. The lecturer hegan by giving some interesting historical particulars concerning the grape vine, which except the fig. is the oldest fruit on record, In the Bible the grape was frequently mentioned, and we were informed that Noah planted a vineyard and made use of wine. By the early Hebrews, Egptians, Greeks, Romans and other ancient nations the grape appeared to have been popular, and generally cultivated for wine. Later on the cultivation of the grape spread to all the countries bordering the Mediterranean, and has ever since continued to be a prominent agricultural industry. In England, also, from the 10th to the 14th century vineyards were said to have been common, as they were frequently mentioned in Doomesday Book and other old records. When grown under favorable conditions the grape vine would attain a great size and age; and there were records of vineyards in Spain, Italy and Greece which had been productive for over 300 years. In modern times there were several instances of grape vines attaining a great age. The celebrated Hampton Court vine in England (planted in 1769), when over a century old covered over 2,000 feet of wall space, and produced over one tou of grapes annually. Another celebrated English vine at Valentines, in Essex, planted in 1758, attained a still greater size, and when more than a century old yielded, in one season, over 2,000 large bunches of grapes.

These instances, the lecturer said, showed that the vine was naturally a very longlived and productive plant, and that when well managed vineyards would last for long periods. It was nothing but faulty treatment, either in the preparation of the soil or the after management of the plants, which caused so many vineyards to fail early, as they often did in this part of the world. If treated rationally vines will be as long lived and productive in Australia as in any other part of the world. In In Europe the grape was successfully grown for wine up to the 51st degree of latitude. But in southern regions the limit was about 30 degrees. As regards altitude, the highest point in Europe where the vine was grown successfully for wine was 3,000 feet in Spain, the limit at Teneriffe was 2,500feet. Though the vine would grow freely, and bear heavy crops, in latitudes and altitudes higher than those named, yet the fruit possesses more acidity than in warmer regions, and was unfit for making wine. On the other hand, in the tropics there was too much heat for wine making, as the juice began to ferment before the berries were ripe.

The lecturer said that New South Wales was as favorably situated for the production of wine as any country in the world, satisfied, and there is whiskey and like un- soil that we might produce wines of every | yield.

ing through his veins on returning home hallowed material to feed them, there will class favorably known in Europe. In our warm inland districts we could produce heavy strong wines like the port and shorry of Portugal and Spain: while in the higher and coast regions we could obtain such wines as Challis, Hock and Claret, equal in quality to what was obtained from France and Germany. B fore long colonial growers would doubtless be able to develop a large trade in wine with Great Britain, and there was also a considerable local demand which, as yet, was not nearly supplied. Last year we imported into New South Wales 20,650 gallons of sparkling wines value £36,047; 175,244 g.dlons of still wines, value £64,531; and 339,925 gallon, of brandy, value £182,519. The total value of the wine and brandy imported was £637,789, every pound's worth of which night have been raised in the colony Growers, however, if they wished to inerease their home and export trade, must be careful to produce good articles, as much of the colonial wine now produced was deeidedly interior.

> Mr. Crichton strongly advocated that more attention should be paid to the drying of grapes, as there was a large local demand for raisins and currants. In South Australia, grape drying was already a well established industry, and large quantities of raisins and currants were sold in Adelaide. In California, a country somewhat similarly situated to New South Wales, the raisin making industry had assumed larg proportions. The lecturer said that the grape vine was bardy, and would do in a variety of soils, and might even be planted in localities where no other crop would sac ceed. Like other cultivated plants, however, it would thrive best under liberal treatment. In preparing for vines the soil, when practicable, should be deeply worked; and provision should be made for effective drainage, if necessary, as the plants would not thrive with water stagnating at their roots. Such matters as pruning, training, the treatment of insects and diseases were next dealt with by the lecturer in a thoroughly practical way; and he concluded by giving selections of varieties suitable for different purposes. For raisin making he said that special thick planted varieties, such as the Muscat of Alexandria and Muscat Hambro, were required. A selection of table grapes should include such varieties as bore freely, and produced large and showy bunches of well-flavored berries. The selection should also include early, late and medium varieties. In making a selection of wine grapes, growers must remember that earliness, lateness, color, size and appearance were qualities of no consequence; the only requirements to be considered being quality and productiveness.

WINE PRODUCT OF SANTA ROSA

Included in the report recently submitted by Captain Guy E. Grosse, Committee on Statistics, to the Santa Rosa Board of Trade, is the following carefully compiled table, giving the amount of wine and brandy, manufactured in that city and township during the year: I. DeTurk, wine 200,000 gallons; brandy 7,000. J. Metzger, wine 40,000. Armstrong & Doha, wine 30,000. E. W. Davis, wine 100,000; brandy 2,500. Buckner Bros. & Requa, wine 10,000. T. L. Harris, wine 160,000; brandy 1,690. Burnham, wine 37,000. Mrs. Leveroni, wine 20,000. Total number gallons of whee, 597,000, and of brandy, 11,100. such perversion, must need often be fed and There was so wide a range of climate and Last year was far below the average grape

REET SUGAR MANUFACTURE.

According to Claus Spreckles we are going to become beet sugar producers ourselves. "We may and then again we may not." As Shakespeare (or Bacon) said: "We know what we are, but not what wa may be." We are in the habit of thinking that Germany has been a great sugar producer for a long time, but it is not so very long since the industry was pretty small notatees-or heets-in that country. In a recent report by Coasul Warner, of Cologne, it is stated that in 1871-72 only 18,000 tons of heet sugar were produced in the whole German Empire, while in the season 1886-87 over 87,000 tous were manufactured, and it may be possible that Mr. Spreckles will make such a showing of the beet sugar capabilities of this country that in ten or fifteen years we shall be turning out such quantities of the stuff as shall, from the very magnitude of the business, impress the b hobber, whose mend is free from acquaintance with growth of the industry, with the id a that we have been in the beet business ever since w were boro.

The Garman maunfactur is are still inent on improving their processes. Consul-Varner says: "The improvement mad in he compaign year 1886-7 in the technical vorking in the manufacture of beet sugar vere mainly in the dir ction of simplifying he separation and purifying processes and s also in the saving of material and work. Especially the treatment of the juice with sulphuric acid found great use, and improved methods of filtration were more frequently adopted, while the use of bone coal has almost been given up. In the campaign of 1886-87 I47 factories (against 162 the preceding campaign) prepared from molasses sugar, of which fifty-five worked with the osmose process. But in consequence of the low price of sugar and the proportionate high cost of molasses, this process has not found use by a number of the factories supplied with the required apparatus on account of its not being sufficiently remunerative."

The diffusion process of extracting the juice is nearly universal, it being used last year in 397 of the 401 factories in the country. Fifteen years before the press process was employed in 216 factories out of the 311 in existence at that time. The problem of extracting seems to be solved by the perfection reached in the diffusion method, but in the separating and parifying part of the process of manufacture no one method has yet succeeded in driving out or superseding several competing processes. The consul names several methods-the osmose, the elusions, the substitution, the precipitation, the elimination, and the strontium-and gives the number of factories using each process in the seasons from '82 to '87. Only about half as many factories used the cosmose process in '87 as in '82; the elutions method a little more than held its own; the number using the substitution plan has not varied in the last three seasons and was greater than in '82; the precipitation process was less in favor than it had been; the elimination method had grown steadily in the number of factories using it; while the strontium appeared first in '87 and was used in four factories. From this it appears that the process is yet to be discovered. Perhaps it is reserved for this country under the lead of Philanthropist Spreckles to give the ne plas ultra process to a waiting world .- St. Louis Grocer. ----

Subscribe for the MERCHANT.

TINETARDS OF CAPAY.

That the footbill lands in Capav valley are peculiarly adapted to the successful culture of wine grapes is evidenced by the vineyards already in bearing there. The industry has passed beyond the stage of experiment, and it has been demonstrated that a better quality of wine grape can be produced here than in almost any other portion of this country. Soil and climate seem to happly combine to produce this result. The French experts, M ssrs E. Ludon and T. Rossmud, who, in making an examination of the soil of the valley, had specially in view its adaptability to the culture of wine grapes, pronounced Cap or walley in all respects preferable to Najor valley for this purpose. This is testimony of the highest character, but it would not be needed to convince anyone who has made a personal examination of the vineyards now growing in the valley.

Upon the tracts purchased by the Capay Valley Land Company, there are five vinyards, all showing a fine growth, and demonstrating by their productiveness and the quality of the fruit, the adaptability of the soil and climate. The largest covers 126 acres and is beat-d midway between the towns of Guinda and Rums-y. It is situated on what has ben known as the Levy tract, comprising 600 acres of spletidid land. It is proposed to cut this trict up into three pieces, so as to give each purchaser a good-sized vineyard in bearing and a fine tract of land suitable for the cultivation of either fruit or careals. The land will be so subdivided that each purchas r will have a frontage on the county road, where he can build his residence, having his trees in front and his vin yard back of the house, towards the hills on the south ast. The vines on this place are three and four years old, and will this year produce over 200 tons of a fine quality of wine grapes, most of them being of the Zinfan lel variety.

This tract could be subdivid d so as to give twenty-five acres of vin-yard with fifty acres of the unimproved land. It will be sold on long time, at a low rate of interest, and is one of the best investments effered in the entire valley. The vines have never been irrigated, and will never need any irrigation to insure an abundant and neverfailing crop.

Another splendid illustration of the adaptability of the soil and climate of the Capay valley to the culture of the wine grape is the celebrated Orleans vineyard of Arpad Haraszthy, which is best 1 in the foothills a little south of the entrance of the The vin yard comprises 150 acres of old vines, from twenty to twentyeight years of age, and 150 acres of new vines, four years old. Twenty two acres are of Flame Tokay. splendid shipping grape, which ripens much earlier here than in any other part of the State. Madeline, another of the varieties produced here, can be marketed by the Fourth of July.

There is a winery on the place with a capacity of about 300,000 gallons. The wines made are principally the Orleans Biesling, a white wine of high quality. aimilar to the best Rhine wines, the Zinfandel claret, which has a great resemblance to the finer clarets of the Borleaux district in France, and is remarkable for its bouquet and the Burgundy Rose, which has a high flavor and strongly recalls the hest products of the Burgundy district. Last year wines were also made from the Semillon, Sauvignon, Folle Blanche, Verdal Mataro,

Tanuat and other varieties, for use in blending.

On this estate there are also growing some 600 olive trees and several hundred prutic. persummon, almond, orange, lemon, English walnut, and chestnut trees, all of which grow luxuriantly anywh-rein Capay valley.

In considering the future of the wine industry of Capay valley, it will be interesting to the read r to know something of the present condition of the infustry in Califormus. Mr. B n C. Fruman, a competent authority on wines and grape culture, wrote a series of articles during the year 1887, which presented a vist amount of r-liable information on the subjet. We tike the following data from a summary of ;

On January 1, 1887, there were 91,043 ceres of wine-growing grapes in California, composed of the "Old Mission," the graps introduced by the Franciscans 100 years ago, the Zinfaudel, introduced by Colonel Agoston Haraszthy, some sixty-five years afterward; and subsequently; all the choice varieties of Germany and France, and other countries, prominent among which are the Carignane, Grenache, Riesling, Golden Chasselas, Cabernet Sauvignon, Sauvignon-vert, Cabernet Franc, Bur ger, Trouss au, Merlot, Pinot Rose, Petite Boise, Black Burgundy, Mataro, Chauche, Noir, M. unier, Tannat, S. millon, Charbono, Milber, Colombar, Moselle Riesling, Folle B'anche, W st's White Prolific, and a great many others, and that there were probably at least 5,000 ner s of new cuttings put out in 1887, which will give about 100,000,000 vines in all.

The wine making interest represents a capital of about \$65,000,000, and gives employment, dir ctly and indirectly to (0) (000 men.

Only as far back as 1551, the annual wine yield was but 5,000,000 gillons, while the production in 1886 was 19,800,000 gallons, and the shipments of wines to Eastern houses which includes all points east of the Missionri and Colorado riversi during 1880 amounted to an increase of 1,600,008 rollans aver the wine shipments of 1855 or an increase export to all points outside of California of about 2,000,000 gallons of wines during 1886 over that of the year preceding.

Wine-making in California has passed the experimental stage, and great progress has been made in planting, pruning, gathring, crushing, fermenting, handling, storing and agoing, while the climatic conditions and richn-ss and varieties of soil give to California wine makers superior advantages which will enable them, at no distant day, to generally place better and purer light dry red and white wines and much purer sweet wines on the American market than either Germany or France

Ten years ago very few epicurean Califormans in lule d in their own wines, especially in their clarets, sweet wines and champagnes, but during 1886, Californians drank I 200 000 gallons of their own white wites, 2.5 (0.000) gallons of red wines, 700, 000 g dlons of sherries, ports, angelicas and muscatels, and 12,000 cases of chairdry and sweet European wines, and from ing and properly handled and agod. 14,000 to 16,000 cases of foreign-made champagn - annually.

lons of wine made in 1880, has been transported by a formed into brendy, and as the in a sectdemand for dry wines--the propertion it reds and whites being about as the terms -enters largely into every basiness mads mind the production of sweet with a general ally is considerably restricted and persand sherries will be hereaft r less pleatefully made -that is, for two or three years to come, those on hand will be satisfactorry aged, and fine selections will be here it is stiffly hold

Some years, as in France, California produces exceptionally fine win s, and experts cannot fully compr hand the cons-It may be the result of a commutation of atmospheric circumstances, such is an entire absence of all mental disturbations, etc., which no mind can fully partial or diagnose. Thus, 1876, 1878, 1880 and 1884 were exceptionally good years, and the pearsts, that are often harsh to the taste wines produced during those years wir presentmently excellent-securicles of the the abundant crop of light wines of the latter year gradually found its way into th hands of the trade and was well appropriated, The wines of 1855 and 1886, he a vir are rich and full in body and eder, but th y are developing slowly, and will be late, therefore, in entering the market for generaal consumption.

Some ten or twelve years ago, great numhers of grape growers tore up their vines, and as the people there want cheap wines and planted their vineyards in fruits, etc. There was no sale of or d mand for Cali, wines from a single grape, and dose them forms wines at Lome or abroad, comparatively speaking. Since then, partly on a count of the increasing excellence of and demand for California wines and partly on account of the prevalence of so much amount of natural tannin, and a proper phylloxera in France as to compel the dosince of sugar. In a work a perfect wine mak is of that country to send out all sorts of made-over and adult rated Conjecut strong, it gold sider, good amount of iforma. Spanish and Greek wines and musts and other spurious imitations of Bordeaux perfume, savor, they rand from a and posproductions, all fears of over-production sess durable queeties. Without resorting have passed away. To make himself sare to blending, wengre at all regressed fail to of this he wrot to a wine making frond probe such a wine. There is no reason who tore up forty acres of vines in 1875, to dealst that in cours of true our wines and he replied. "Great fear and apprehen- will not only be known as jurer and better sion have heretofore been ent rtained of than anything mighted, but that they will over-production. The steady increase of because as famous and comment as good our vineyards, productiveness of soil and prices as those of the most celebrated vineclimate, threatened to overbalance the varis of G rmany and of France. healthy equilibrium of supply and de-But in spite of prohibition and fanatical temperance agitation in some of valley to estimate using it in is necessary, our States and the reluctance of Congress which is an of the resons for the dryness to protect pure wines against imitations and represent aroma of the wines produced and adulterations, we are making progress there. Every known variety of grap can in every direction-we carry no surplis of 1. grown thir in perfection with utilities accumulated stocks-our vineyardists are as active and stirring as ever, and we are ty for Elinbing with at southing the wines confident of continued success. Lower prices, cheaper rates of freight, a very products of other beddit s, during which noticeable change for the better in the average quality of our wines, and, above all, their indisputable purity - dl th se facts sont out wines un br his own label, with will act as powerful agents townds a right the ertifuty that they have not been extension of our market and the general rump red with, and our guaranter their distribution and introduction of Children v.

Careful examination convinces him that pager, as against 7,000 cases of imported good dry and sweet wines and that even French was show a quired a reputation champagnes of various brands, 60,000 gal- the Mission (which has been so severely upon which the win increbants of the ions of French and other foreign dry red manigmed, and the Zinfan tell which is not were will buy them a'm, st with interamand white wines, and not enough sweet so much a favorite at present as it was 20 mation of the goals. wines to mention, while only a few years years ago, are capable of producing charts.] While will the favorable conditions surago Californians drank 900,000 gallons of of good quality, expectally if us d in blonds r anding this beautiful valuey are taken

About one-righth of the 198010 or give aim so which I alich it. is for severe Later. All spr Lesa iz body. I'r, tabrib, into Azin these blends are rich as 1 maste classiff the niferent conditions of a d'and of and often to peculiarior and wanted and Forexample, To per dent. Shomes only in 1886, and 20 to rooms of Matero, 200 of Tannat and 10 of Verlot, all ar whilet diff rint of vittoris from that of the Zofar bit to stitut a sapendal charet, aggregating body of the astrongency, around and hor query. In Napa, we remaper cont. d Cab root Seaven on to three or four that choice wines would give a beverage that with proper age and manipulation, would alsoly cross! Chapter Litour for

"There or many pairs waters," said Mr. Harasziby a few lays ago, and especially and unmaiting to the eye. Hence arrises the nor serve of then be 2. The first consider ration in making over this the color. A be proby trues is distrible, and to obtain is dishen and derivate per be adult ration sant of oreal at possible If no one cardirect which is rally footrae consequence, the goldest temptation to res rt touting dy's and other oblitersnone were least to aist. A light-colored claret would not a ll in N w Orl ans at all: bey git thim from houses that buy up new tesus the Crobery for other alone. It requires either age in bonding, or both, to make a perfect characted were public color, delicate discontriguistic body, a good claret should go between 11 and 12 per name at astrongency, and have an oder, a

These remarks are especially pertinent to the subject in hand, because in Capty tion, this giving the most ample opportunito some large city to be bounded with the process they may to adulterated. wine maker of Cq is villey will be able to As dute purity. This will give them is standing in the nearly to if the world, and he will response the work. It is because all parts of California make or can make of this quartinity that certain branks of

into considering nother chinate, soil and transportation facilities-there can be no The coming clar ts will be blended ones, transportation facilities—there can be no for it is the skillful blending of choice doubt that it • 4 stined to become one of

and the time will come when its products will not only be known throughout the United States, but will be found upon the tables of Europe.

BRANDY DISTILLATION

The following is the text of an order recently issued from the office of Internal Revenue, Treasury Department, at Washington;

To Collectors of Internal Revenue

When a distiller of sprits from grain or molesses is notified of a proposed assessment under Section 3309, Revised Statutes, and he has reason to believe that the hability in whole or in part has been caused by an unsvoidable accident or by a misunderstanding of the law and regulations, and claims relief under Section 6, Act of March 1, 1879, as amended by Section 8, Act of May 28, 1880, affidavits will be require ed from the distiller, storckeeper, ganger and other witnesses, if any, fully setting forth the facts and the extent to which the actual product or the required expacity has been affected by accidents or misunderstanding. These affidavits should be sent to the Deputy Collictor of the division in which the distillery is located, who should diligently inquire into, ascertain, and state the facts in the case, give estimates of the amount of loss, if any, of spirits occurring by unavoidable accident or misunderstanding of the law and regulations, certify to the same, and transmit the papers to the Collector, who will then write out his epinion of the evidence in the case, with his recommendation as to omitting the proposed assessment or any part thereof, as may appear to him equitable and just, and then forward all the papers with his opinion to the Commissioner. A strict compliance with these instructions may avoid the calling for additional papers.

Collectors are expected to keep in their respective offices the evidence that grain and molasses distillers have been, prior to assessment, notified of the liability for excess, or deficiency, or for both, as the case

FRUIT-BRANDA DISTILLERS.

Explanations of distillers of brandy from apples, peaches and grapes, intended to show why assessments certified on Office Form 145 should not be made, often show that greater care should be exercised by them in operating their distifferies under the Internal Revenue Laws

It is sometimes alleged, for example, that but one still has been used, while the distiller is charged with the enpucity of two stills. Upon examination it is found that the two stills have been registered (Form 26 for use and that the distiller had not afterwards registered one of them not for use (Form 27.) nor made application on Form 143 for reduction of capacity. The records of this office, therefore, show the capacity of the distillery to be the capacity of the two stills as shown by the survey, and not merely the capacity of the one still which the distiller actually used. The law, moreover, requires the Commissioner to assess the tax on the deficiency in production below eighty per cent. of the capacity as fixed by the lawful survey-that is, in this case, on the deficiency below eighty two stills. Collectors will please call the fruit-brandy distillers to this matter.

to have been frequently overlooked: The zine will wash off the color.

he most noted wine districts of the world, law requires the Commissioner to determine the deficiency taxes monthly; and as the time operated by fruit distillers each month is arrived at by aggregating the hours run and deviding by 24, counting the remainder as a whole day, it is advisable for such distiller to operate such a number of hours each mouth as will be exactly divisable by 24. This can be accomplished through the exercise of a little forethought.

Many distillers claim that the failure to produce the required capacity is due to the use of inferior, green, or over-ripe fruit. The distiller who uses poor materials, whether grain or fruit, does so at his own

It is also expected of distillers that they shall use good machinery and apparatus. The fact that a tub or a still is leaky is not of itself a sufficient reason for omitting su assessment for deficiency. Fruit distillers should take special care to see that all vessels to be used are made water-tight, and are put to thorough repair before the commencement of the distilling season. These precautions will, it is believed, greatly lesson the occasion for making assessments caused by loss of cider, singlings, or other

If, however, a distiller is notified on Form 245 of any deficiency, he should at once sign the paper, to presence of a witness (who should also sign), and return the paper to the Collector. If the return is not made within 30 days, the Deputy Collector should send a certificate to the Collector to the effect that the notice was delivered to the distiller in person, or mailed to him, as the case may be, and give the month and year in which liability is incurred, and the amount of tax due.

If the proposed assessment against a fruit distiller is occasioned in whole or in part by an unavoidable accident, or a misunderstanding of the law and regulations, the instructions to grain distillers as to submitting evidence will apply, Deputy Collector should certify in detail, giving estimates of the loss of spirits, so that the true hability may be readily ascertained by the Collector and determined by the Commissioner.

Collectors should see that "Extracts from Regulations, Series 7. No. 7," concerning the distillation of brandy from apples, peaches, or grapes, are placed in the hands of every fruit distiller in their respective districts, and receipt taken therefor on Form No. 163 Copies of the "Extracts" and Form No. 163 may be obtained by requisition on the office,

Evidence intended to show that a proposed spirit deficiency assessment should not be made, if forwarded to this office, without the Deputy Collector's certificate and the Collector's recommendation, will be filed in this office, and may be considered in connection with a claim for abatement on Form 17, or for refunding on Form 46, but cannot be regarded as sufficient to warrant the omission of the proposed occi cement

E. Henderson, Acting Commissioner. Approved.

HUGH S. THOMPSON,

Acting Secretary of the Treasury.

YELLOW diamonds are made blue of the per cent. of the surveyed capacity of the purest water, for the time being, by being colored with a common indelible blue penspecial attention of their deputies and cil, equalized by a rabbing with cotton or linen. A magnifying glass will fail to show Another requirement of the law appears, the fraud, but alcohol, turpentine, or ben-

THE OLIVE.

grow anywhere and serve for almost any purpose. On a dry and stony elevation habitually preserve the durker berries for that would starve out a thistle, the plant luxuriates; and if the sea breezes may but ble to the taste, "go" further-a necessary fan the young shoots, so much more of promise is there for the clive harvest. Propagated chiefly by cuttings, the willowy looking twigs take root with a proud defiance of ordinary rules; and their is a whimsically planted grove of olive trees of nousual size and beauty near the town of Messa, in Morocco, which illustrates this trait in a remarkable way. One of the kings of the dynasty of Saddia, being on a military expedition, encamped there with his army. The pegs with which the calvary picketed their horses were cut from olives in the neighborhood; and some sudden cause of alarm leading to the abandooment of the position, the pegs were left in the ground, and, making the best of the situation, developed into the handsomest group of olives to the district. Olives are met tioned in the earliest records of Egypt, and their introduction into Greece took place at least as early as 1,500 years before our era. Thence their cultivation naturall passed into Italy, the Romans especiall prizing them; while Virgil mentions thre distinct varieties, each of which has it own fastidions supporters in the ancient conflict of tastes. Pliny also tells us that they also grow in the heart of Spain and France though he awards the palm to th smaller olive of Syria, the olive that was at least more delicate than that produced in the western countries. So far as regards the oil of Spain, and to some extent that of Italy, this judgment standa good to the present hour; for the reasons that the Spanish olive is a large and coarser fruit, while the Italian growers are to apt to de tract from the limpid delicacy of the virgin oil by the sacrifice of quality to quantity. For the olive, like all generous givers, demands that you should "squeeze" him gently. The oil is expressed from the entire pulp and body of the fruit, and its body stands in inverse proportions to the quantity produced. The first pressure yields a thin, pure liquid, almost colorless; and with this even the most fastidious of English palates rarely make acquaintance, As the pressure is increased a less delicate product is the result; while if it is still further prolonged a rank and unwholesome residum is obtained, wholly unfit for edible purposes. It should be mentioned that virgil oil does not maintain its freshuess for more than a few weeks without the addition of sugar, and it is almost impossible for any one to realize the exquisite delicacy of this first expression of the freshly gathered olive, unless he has sojourned in such a district as that which, say, Aviguon is the center. The oil of Aramont, in Provence, was formerly supposed to have no equal in Europe. Both the olive and the manufactured oil of the southeast of France are, indeed, still unrivaled by those of another country. The Italians pay more respect to the commercial aspect of their production, aud among them the number of olive farmers and merchants is very large. They have a proverb, "If you wish to leave a competency to your grandchildren, plant an olive." Doubtless the advice is sound enough, for the trees often flourish for more than a century, and bear heavy crops to the last. But to the peasant of South France the

laborer. Prudent housewives there are as adverse to the introduction of a new Within certain latitudes the olives will fruit at table as their thirteen English sisters are to the "new" loaf. In fact they everyday use for these not being so agreeaconsideration when they oftener form the stuple than the accompaniment of the meal.

Olives intended for eating are gathered while still green, usually in the month of September. Thy are soaked for some hours in the strongest possible 'lye' to get rid of their bitterness, and are afterwards allowed to stand for a fortuight in frequently changed fresh water, in order to be perfectly purified of the lye. It only then remains to preserve them in common salt and water, when they are ready for export. Among the Remans the clive held he privileged position of being equally resp cted as a doudy accessory and an ordinary food. It was caten at the table of the temperate and luxumous alike; and, while dividing the bighty flavourd dishes of their xtravagant suppors, formed a constituent of Horace's postoral m al-"Of olive, endive, simple tastes, and mellow."-Ex.

CHENICALLY PERS BRANDY.

The G. M. Jarvis Company of San Jose are now the most important brandy distillers in the United Stat s. Their brandy is made by a new process that removes the fusil oil and leaves it chemically pure. Its characteristic fragrane; and bouquet are proverbial, and its flavor on the palate is rich and invigorating with a fine aroma. The Chicago Medical College says: "The Jarvis brandy is exceptionally pure, besides it has all the elements of good brandy as found by analysis by leading wice chemists.

The G. M. Jarvis Company were award d the first premiom at the great World's Fair at New Orleans for finest brandy and best port wine. They have gold medals from our State Fairs, Mechanics' Fair and District Fairs, and their brandy stands head and shoulders above all competitors on this Coast. They have a working capital of \$50,000 incorporated in 1885, but the president. Mr. G. M. Jarvis, has been actively engaged in growing grapes, making wine and distilling brandy for a quarter of a century. He planted his famous Vine Hill vineyard in 1860 when we were nominating the immortal Lincoln for President. The Company have an Eastern agency at 39 North State street, Chicago, and have a large and increasing trade all over the great northwest. The Santa Clara valley and the adjacent mountains are probably equal to any part of Europe for luscious grapes and for most semi-tropical fruits. It is in this great center of this fine fruit county that they select their fronts for wine and brandy making.

A GOOD SHOWING.

The second annual meeting of the Saratoga Wine Company was held at their winery building at Saratoga last Saturday afternoon. The last year has been a very profitable one for this Company. A dividend of forty per cent. was declared, on a espital stock of \$15,000, leaving a surplus of more than \$1,000, which has been added to the reserve fund. The following officers were elected for the ensuing year: President, A. D. McDonald; Secretary, A. L. Sage; Treasurer, First National Bank of San Jose; Directors, A. Berryman, J. M. Jarvis, Peter Warner, A. L. Sage, A. D. olive is almost what the pig is to the English | McDonald.

THE CREMISTRY OF WINE

In a fermer article published in this journal on the 22nd of June, 1888, under the above caption, reference was made to the chemical changes which take place in the natural agoing or maturing of wines after fermentation.

This article is intended to show that all the chemical changes which take place in the paice of the grape, from the time that it leaves the wine-press till it becomes old ripe wine, are purely chemical from begin ning to end, and that a chemical change, when once effected, can never be reversed. In other words, when a wine or liquor has been matured by time, or by any process which hastens time, nothing whatever can change it back to its original condition,

It also shows the reasons why a wine is liable to spoil, and is unhealthy and unfit for use before certain chemical changes have been efficied, and also that when those definite changes have taken place, no matter how produced, the wine is fragrant, delicious, exhibitating and healthy, and is not liable to spoil like a wine in which no chemical changes have occurred.

When the juice called must is pressed from the grapes, it contains, in a condition of mechanical mixture principally water, grape sugar, essential oils, tartaric and other acids, the tartrates of lime, soda and potash, tog ther with the nitrogenous or proteine compounds, called albumen, pectine, gluten and caseine.

The first chemical change which takes place is the transformation of grape sugar into alcohol. The intensity of this change is very great. By its action heat is generated and carbonic acid gas is evolved.

After the sugar has been transformed into alcohol, no process known can possibly change it back again into sugar. The change is definite and permanent.

The second chemical change (which goes on simultaneously with the third change is the transformation of the essential oils into aromatic ethers. An ether cannot be changed back into oil and alcohol no more than soap can be changed back into the lye and grease from which it was made.

The third chemical change is the extraction of the rich flavor and smooth body from the proteine compounds and the precipitation of the inert residue, together with the earthy tar rates and other impurities. This change cannot be reversed no more easily than a mellow and delicious winter apple can be changed back into the hard sour and indigestible thing that it was when it was placed in the cellar.

A new wine, disagreeable and unhealthy as it is when new, really contains all the elements within itself to make the rich, delicious and healthy old wine, that tickles the palate of the connoisseur, and fills his brain with cheerful delight.

It may be stated as a general rule that a chemical change when effected is not reversible of its own accord, consequently, when a wine is once rip ued it is impossible for it to change back, into its original condition of new wite.

The nitrogenous or proteine compounds are really the most important components from was paid to it whatever. It was in wine, with which the wine maker has to deal. It is in them alone that germs propagate and grow. As long as they exist expected that the wine had spealed, yet in wine, germs will be present, but as soon upon examination, to my great surprise, as they cease to exist as such, no germs, both kinds were char, bright and sound, can be found. If it was possible to kill all and possessed the bouquet and flavor of the germs, exposure to the air would ripe old wines. The barrels had lost by develop a new crop, if proteine was still evaporation at least t or 5 gallons such present in the wine. Heat will destroy consequently lacked that much of being

substances so that their beneficial effect those unfavorable conditions upon the wine is lost. That in the chemi cal changes which a wine undergoes by age, those compounds decompose and form new combinations with the alcohol and acids, is a well-known fact. That they add volume and richness to the wine, there seems to be no doubt, and that their inert residue preprecipitates and is separated from the wine by racking, is well known.

Whenever any trace of proteine is present the wine is immature, and is hable under certain conditions, to either ferment or turn sour. It is, therefore, the problimcompounds and not the germs, that renders wine liable to spoil.

It is well known that California wines, made from the finer varieties of grapes. contain all the elements that go to make the finest old European wines. The reason that California wines are unpopular, is the as II-known fact that they are generally put apon the market in a too new, nuripe and immuture condition. The proteine compound being still present, the wine will sometimes not stand transportation across he continent to the Eastern markets, without a liability to spoil. If in addition to he presence of the nuconverted oils, acids, and proteine compounds, salveille acid, or any other poisonous preservative, is added to keep the wine from spoiling, its unpleas ant taste and unhealthy condition is thereby increased. The public caunot be educated to use a wine that is unpleasant to the taste and that makes the consumers sick.

The California wine growers have shown a wonderful amount of energy and perseverence in cultivating the finest varieties of imported vines, and all that now remains for them to do is to furnish their wines to the consumers in a fully ripe and mature condition. When this can be done, the consumption will increase immensely, and the price will advance in proportion to the greater demand.

As has been already shown, all that is necessary is the transformation of the original elements into new combinations. This can be done either by the old time process of letting it lie in cellars from three to five years, or by placing it in the mag netic field for a period of from four to six weeks. That the latter method can show results that can not be excelled by the former, is shown very forcibly by the following certificate from one of the most trustworthy citizens of San Francisco.

THE "FRASER" PROCESS.

Of all the numerous tests to which wines treated by the "Fruser Process" have been submitted, one of the most important to my mind was in my own cellar at 123 O'Farrell Street, in this city

Two tanks containing 105 gallons each were filled with wine on the 26th day of June, 1886. One was filled with Zinfandel claret, and the other with Gutedel white wine, both made by J. H. Diummond, Esq., of Glen Ellen, Sonoma County, of the vintage of 1885. After the wine was under treatment about five weeks, it was put into barrels and kept in the cellar. No attenneither racked nor were the barrels filled for a period of twenty months. It was

germs, but it will also cook the nitrogenous full, yet the win shall kept perfectly und r

the the other band, the samples of the untrouted wines that are kept under equally favorable conditions, hel entirely spoiled. This experiment proves very clearly, to my much that not only bouquef and flavor are developed by the process. but the wine is preserved against secondary fermentations, and childality to spoil under the most unfavorable conditions.

THOMAS PENTINGTON

San Francisco, June 6th, 1888

STETANA RAISINS IN ASIA MINOR

The principal supply of this important article of commerce comes from Smyrna, the vineyards lying generally within twenty miles of that post. Those situated upon the sea coast require great care to protect them against mildew, for which the sulphursprinkling process, if properly employed, proves sufficient. The best quality of raisin is made from hillside vin yards, having well drained soil with a good proportion of iron in it, and a southern exposure. The greatest annual yields, however, are get in the deep, rich soil of the plains or valleys when properly drained and the vines well exposed to the sun, but protected against both hot winds and cold currents of air Hillside vines are the longest lived, frequently bearing for nearly a century. In starting a nursery, trenches are dug in late fall or winter to a depth of about three feet, all stones, roots and other hard substances being removed. This work is done with spades and forks, and often cone over several times before planting. The cuttings, which are planted three feet apart, and carefully watched until transplanted, are kept perfectly free from weeds and all vine pests, and when needful are watered by hand. Planting in the vineyard is done from March 1st to April 15th, the vines being set from nine to ten feet apart. Smaller intervals produce the shading of one vine by another keeping out the sun. which is indispensable to ripen the fruit No system of arrigation is practiced, but some water is used in some localities where the soil needs it, and water is accessible. Rains prevail more or less during the growing season, sometimes doing great damage during vintage. Cultivation, as performed by the native proprietors, is wholly by hand, with the rudest of tools, but of late years vinevardists from France, Spain, Italy and Greece are introducing the better methods and nuproved implements of those countries Vines do not come noto bearing sufficient to pay expenses before the fourth year. Grapes begin to ripen about July 1st A portion is left to dry upon the vines, first enting through the stalk of each bunch This makes a common grade. The best grade is made by dipping the grapes into a hot by male from wood ashes, or ashes of plants found on the seashore. This lye is filtered, and when of the specific gravity of 10 per cent, greater than water, is of proper strength. To every four gallous of this lyare added one past of olive oil and four ounces of salt . After dipping, the fruit is sprend upon hurdles of wicker work and set to dry. In the interior, where their are no fogs, and the nights as well as the days are hot, the hundles or stacked to keep out the sun, but admit of an passing over the first, and thus acquire the amber tiut, so much desired in Suitana raesins

Subscrib for the Mrse HAS.

GRAPE GRAFTING

As regular as the season comes round I am asked to describe the mode. By the time this gets before our readers some who are in a hurry may have already done the work. After many years of experience, doing the work at all times, from the time the frost was out of the ground, until the vines have made shoots a foot long, with varied sone so I have come to the conclusion that the best time is when the vines have started to grow, the grafts being kept in a cool, shady place so that they were a little behind the stock in starting. To keep them entirely dormant in an icehouse, as some recommend, it is wrong I have had the buds on the grafts swollen ready to burst when inserted that started to grow in a week after. Clear the ground away from the root three or four inches deep, saw off a smooth place at the bottom. If no smooth place can be found, saw into the stump instead of splitting, as usual, A thick, wide-set saw I prefer to the knife, even in a straight stump. Shave your graft to fit the cut with a shoulder, tie if the stock is less than an inch in diameter, then fill in the earth carefully, press firmly but do not move graft. Hill up to the upper bud, stick a peg one inch from each graft on one side, alway on the same, so you can tell exactly where the graft is. Then cover the eye over with a handful of sawdust, throw a little mulch on and leave it until the grafts begin to grow. I use two-eyed grafts, unless the wood is longjointed and thick, when one eye will answer. When the grafts begin to grow the suckers must be kept off. As soon as the graft lagin to grow it must be tied up to a stake to keep the wind from blowing it down. In this way I marly always ge fruit a little sooner than when I buy a small vine. Have now strong vines o Empire State that were set in spring o 1886, bore fruit last year, while three vine planted the year before that cost me \$6 have not borne a bunch of fruit yet, and not much show of doing it the coming sea son. I cannot see the policy of diggin worthless vines up and planting others i their place. Graft them with somethin

TERAFILSO WAX -- How to make this often asked, and while there are man receipts giving, the one that I like bei after torty years of experience is made t follows. Use one pint lineed oil, for pounds resul, one pound be swar. Melt a ver a slow fire, stir well and pour o water, when cool enough to work, great the hands well and work it like shoemaker wax or taffy. Then roll bolls of converent size for putting into the vessel use when grafting. It should be heated ov a moderate fire and put on the grafts thi but not too hot. This wax will not erain cold weather, nor run, even if the weather gets up to 100 degrees in t shade Fx

1 Simple Disintectant.

copperas, simplicate of non-us an exe but disinfect out and should be freely us on the farm during the lest weather. It very cheap and the expense need not demy one from using it. A foulth handf diss dved in a park of water in does a go and officient solution. Sprinkle this incoults, cossponis and house drains once work and you will be safe from any malar influence in that direction. It is one of best articles for this purpose.

VINTAGE AND VINITIEVETON,

SEPA"... 'ON OF SI LEY.

When a load of grapes arrives at the press-house, the question has to be decided whether or not the stalks are to be removed trom the grapes previous to mashing. When woody, and do not easily yield price to any are never separated from the grapes; in pressure, however strong. But when the grapes are less ripe, the stalks are green and succulent, and yield much harsh as tringent juice on pressure. Practically, in the case of white wines, the stalks are never separated from the grapes; in some cases of light wines, which incline to he viscous, it is even advantageous to leave the stalks in prolonged contact with the must. But this is exceptional, inasmuch as must of white grapes is, as a rule, pressed immediately, and not left in contact with the murk for any length of time. The Champagne grapes are also pressed with the stalks, and the juice of the latter causes the last third of the must which flows from the press to be harsh and of less value than the first parts. With most other black grapes the case is different, because they have to remain in contact with the juice for a length of time during fermentation. If, then, the mark is very astringent, and the stalks are left in the fluid, a harsh wine is produced, which requires years to become drinkable. But the same grapes, fermented without the stalks, yield a milder, better maturing wine. They are therefore separated before the grapes are mashed. This separation of the stalks (French, egrappage; German, Abradoen) can be affected by various means. A simple method consists in the stirring of the bunches in a tub with a trident of wood by the rotary action of this instrument the berries are detached and the stalks rise to the surface and are taken off. Another machine consists of a cage of parallel wires, in which a stirrer is revolved by a handle turned outside. The bunches enter above by a funnel, the berries drop through the interstices of the wires of the cage, which at last contains only stalks to be removed by the hand through a side door. There are also in use various net-shaped trays, on which the bunches are manipulated until the berries have fallen through This work is not easy upon all varieties of grapes; ripe Verdot of the palus of the Gironde will drop its grapes like hail when t is merely shaken, while ripe Pineau is not so easily separated. The operation is he more difficult the less ripe the grapes

MASHING AND CRUSBING

The berries, whether separated or not. have now to be mashed or crushed. This nust be done with the precaution not to rush the pips or stones, and the stalks if hey remain. It has therefore always been s favorite mode of commination to let the grapes he trodden by men. We believe hat this is a very excellent method if leanly and properly performed. It is done n a wide wooden platform, or in a large ub, and the juice which is pressed out is Howed to flow off into separate receptales. In some parts the treading of the rapes is done by men wenting heavy oots. In this case the pipes and stalks re easily injured and crushed, and comunicate unpleasant qualities to the wine. 'he same is the case with the ordinary achines or grape mills, which consist of

the feet of m n because working quicker, esontchous:

WINE-PRESSES AND PRESSING.

In the preparation of white wine the must is separated as much as possible from the murk before the latter is pressed, so that the volume of the matter to be pressed is as small as possible. In the preparation of Champagne wine the grapes are, however, not crushed at all in detail previously to their being put into the press, and the only crushing which they receive is by the press itself. It is for this reason that the presses in the Champagne are the most powerful of any known. In the preparaof red wines the juice which flows off the platform or press, togeth r with all the hasks on the press, and the stalks, if they have not been removed, are put into the fermentation vat. Farmentation is allowed to complete itself, the wine is then stirred energ tically with the husks, so us to extract the utmost amount of coloring matter; all the wine which will run off itself is drawn from the taps, and the murk is put into the press, and the wine flowing from it added to the other. Wherever red wine is made, the platform on which the grapes are trodd a serves also as press, an iron screw being fixed in the middle, surrounded by a basket in which the murk is placed. The science of the wine presses would admit of the composition of a separate treatise. Most of these machines reflect the greed rather than the wise ingenuity of their constructors. No doubt a wine press should have certain power, sufficient in all eases to eff et the object in view, namely, the expulsion of all the juice from the murk. But presses which force the juice out of the stalks and the oit out of the pips are injurious to the wine, and should be avoided, or the juice so expressed at the end of an operation should be put aside and not mixed with the must. The most suitable presses appear to be those common in the Gironde, which have an iron screw in the middle, of a high round basket made of perpendicular laths, destined to receive the murk, and a nut, which is turned upon this screw from above downwards by means of levers, presses the wooden blocks upon the mark, which thereupon ooz s its liquid through the basket by which it is surround ed. It is probable that in large establishments presses will soon have to compete with centrifugal machines, which perform in two hours, with the aid of three men. what presses working upon the same smount of material can only perform in seventeen hours, with the aid of seven men.

FERMENTATION

The fine white wines of the Gironde are all fermented in barriques, which in this country are called hogsheads. New casks are always taken; they are not completely filled with must, so that no yeast or imparity can escape from the hung, but all is drowned in the wine. The white wines of the Rhine are mostly fermented in large casks, containing 1200 litres each, and calld "piece" (German, Stuck). Sherries are fermented in tuns and in butts. The Cham pague wines, after having been cleared of scara and deposit, are also fermented in small casks of 220 litres each. It may thus be said that white wine is generally fermented in barrels with only the ordinary bunghole at the top open for the escape of the carbonie acid gas. But red wines are rooved wooden rollers working against fermented in vats; that is to say, conical

cations introduced into the preparation of if the rollers were made of vulcanized red wine by the bulk of the husks and the necessity for stirring. In the Gironde the vats are filled to a certain point; if the stalks have been separated they are placed on the top of the murk, the house is shut, and fermentation allowed to complete itself. The top of stalks is now taken off, together with the outer layer of murk, which is mostly somewhat decomposed. But the hu'k of the murk is now submarged and stirred with the new wine, so that its color may be fully extracted. At last the wine is drawn off and the murk put in the press. In other parts the husks of red must are kept submerged in the fluid by a wooden cover fixed somewhat under the level of the fluid, and pierced with holes to allow the gas to escape. In other districts again the vats are covered, but opened daily, and the murk is submerged with wooden instruments. In parts of Bargundy the vats are not covered, nor is the murk stirred before fermentation is complete. At that period, however, the mixture receives and energetic stirriog by mea, who enter the vats quite naked and work about in the mixture with body and limbs. This most objectionable practice is now happily on the decline. When the fermentation of the red wine is complete, the liquid is put into barrels and allowed to settle. It clears much quicker than the white wine, which remains thick for weeks when fermenting in the temperate atmosphere of northern districts. But the red wice, having been fermented in larger bulk, attains a higher temperature and therefore is finished in a shorter period. In southern parts, where there are mostly no cellars, the white wine, if it is allowed, completes its fermentation as quickly as the red. The only means available in those parts to slacken fermentation is the placing of the wine in stone vats, which by conducting heat better than wood, effect a reduction of temperature of the must, and thereby retard fermentation.

> When the wine has completed its fermentation and become clear, all the yeast and impurity are deposited in the bottom of the cask. From this the wine has to be separated by the process called "racking-" This can be done by drawing the wine through a syphon placed in the bunghole, or through a tap fixed in the most suitable place. The clear wine is put into a clean cask; the cask just emptied is freed of its lees, washed and riused, and is immediately ready to receive the clear wine from another cask to be racked. By this operation the wine generally becomes disturbed a little, or it is not yet quite clear, and in any case requires fining. This is mostly done by means of isinglass, of which a small quantity is soaked in wine until soft, and then stirred with the contents of a cask. All casks thus treated are made bung-full, closed, and allowed to rest for six weeks. After this period the wine is mostly quite clear and bright, and being racked another time mostly remains so. In this state the wine is kept in the celler or shed (chais) until ready for sale, use or bottling.

PRODUCTION OF WINE BY THE PROCESS OF PETIOT.

In 1852, Petiot caused a quantity of black grapes, which by pressing would have given 60 hectolitres of wine, to be crushed, and 45 hectolitres of the juice, which ran off before it had time to ferment, to be collected. He mixed this with an equal quantity of sugar-solution, which contained the same plan in this city and some of our enterprisach other. Such muchines would be less wooden casks open at the top. This is a amount of sugar as the must. This mix- ing men should try it.

objectionable, and perhaps be preferable to mechanical necessity, owing to the compli- ture of equal parts of grape-juice and sugarwater yielded him a very good wine. To the pulp of the grapes which remained behind, Petiot added 50 hectolitres of sugarsolution containing 18 per cent of sugar. The mixture fermented immediately, and was finished in three days; and 50 hectolitres of wine of a nice color were drawn. Pleased with the quality of his product. Petiot determined to exhaust the murk to the utmost. He repeated the process twica more, and each time with 55 hectolitres of sugar-solution containing 22 to 23 per cent of sugar. At last he made a fifth experiment by mixing the murk which had been pressed with 45 hectolitres of sugar-solution of equal concentration as before. From a quantity of grapes which, according to the ordinary proceeding, would have yielded only 60 hectolitres of wine, there were obtained, by the sid of 240 hectolitres of sugar solution, on the whole 90 hectolitres of white, and 195 hectolitres of red winealtogether, therefore, 285 hectolitres of wine -as Petiot says, " wine in the full sense of the word." It was therefore certain that the many matters which are contained in the grapes, or some of them, and which are not extracted with the must, are capable of passing into a large quantity of sugar-solution when it is brought in contact with the grapes or their residues, and of transforming it into wine. These experiments were witnessed by the celebrated chemists Thénard, father and son, who were neighbors of Petiot. Thénard was in the year 1855 prevailed upon to treat the whole of his vintage produce according to this method; and he obtained from a quantity of grapes, which according to the ordinary proceeding would have given him 500 hectolitres of wine, 2,000 hectolitres, the quality of which gave general satisfaction.

> Of the infusion of sugar-solution which Petiot made in 1854, the third gave the strongest colored product. In the year 1855 the whole of the coloring matter of the grapes was already exhausted by two infusions. The new wine is less acid and more drinkable; it has more bouquet than the wine which is made from the grapes directly. It has an extraordinary power of lasting. In June he took several hottles and put them in a warm place to the kitchen. Here they were left standing upwright -part of them without corks-for three months; and while he caused several persons to taste of them from time to time till they were gradually emptied, the wive did not become worse, and remained clear and without taste of acid to the end. He sent a sample of this wine to New Orleans, where it arrived in perfect condition.

> Although the factitious wine contains probably a somewhat larger quantity of unchanged sugar, which gives it a more agreeable taste, yet it does not again pass into fermentation, because it does not contain any fermentescibe albuminous matter. The white variety requires a little more time for clearing, because the yeast is not sufficient to decompose all the sugar very quickly; but once clear, it never becomes turbid again,

MERCHANTS in some of the cities of the State have adopted a novel scheme of advertising. They place a writing desk in front of their place of business where the hurrying public is afforded an opportunity to stop and write as they push along the thoroughfare. This might be an excellent.

THE VINENGE OF 1999.

It is very singular that there should be any difficulty at all in making a proper estimate of the wine crop of California for any given year, and yet there is a widdivergence of opinion whenever it is sought to be ascertained what the probable yield will be. It almost seems as if there was a studied attempt to conceal the real condition of wine making in this State, and to make one of our most important industries appear insignificant and of little value. One can understand why the wine dealers, who buy cheap and sell dear, should underestimate the value and importance of the crop but why any one else should seek to do so is a mystery.

As to the vintage of 1888, the difference of opinion is very great. One man says it will not exceed 18,000,000 gallons, which another insists that it will reach 30,000,000 gallons. Surely there is something out of the way when estimate differ so widely Each estimate is based on the probablyield of the grapes, with due allowane made for contingencies and casualities, and a difference of 12,00,000 gallons in the estimate shows that the statistics of California wine making are not carefully kept

It can hardly be that the lower estimate of the correct, unleas the entire. State is in error as to increased acreage of grapes and increased facilities for wine making. The yield in 1885 was 11,000,000 gallons and in 1886 it was 18,000,000 gallons, and it can hardly be presumed, barring accident, that the State will not make more wine in 1888 than it did in 1886.

The gen leman who made the 18,000,000 gallon estimate argued that the low prices ruling for wines during the last season had deterred viticulturists from increasing their acreage. If he is correct California has reached the end of her career as a wine making country. If a combination of wine dealers who were able to keep prices down for a season is enough to deter wine makers from carrying on that industry, it is time that the vines were rooted out and potatoes or cabbages planted in their places. It is true that the price of new wine was low last aeason, much lower than the the price of wine of similar character in France; but that was due not to any defect in the quality of the wine itself, nor to any abated demand for it, but to the shrewdness of the wine dealers, who formed what Cleveland would call a trust, and used the power of aggregated capital to crush the producer of wine.

The remedy for that state of affairs is in the hands of the producers themselves. It is always allowable to fight the devil with fire, and the way to meet a combination of wine dealers and middlemen is to form a combination of producers. There is meither reason nor justice in permitting the purchaser to fix the price of an article, and if the wine makers would only expresse a little common sense and by aside pealousies and suspicious of each other, they could very easily unite in the common defense and compel the wine dealers to come to them and to pay them a fair price for their wines. Chromiels.

AGE OF THE FARTH.—According to geological computations, the minimum age of earth since the formations of the primitive soils, is 21,000,000 years, allowing 6,700,000 years for the primordial formations, 6,400,000 years for the primary age, 400,000 years for the secondary age, 400,000 years for the tertiary age, and 100,000 years for the tertiary age, and 100,000 years for the appearance of man upon the globe.

THE BAGRING" BENEUT

The "bagging remedy" for grape-rot and mildew is being much talked of and advocated says the l'inevardist as a certain protection against these destructive diseases of the vine. The bags are made of light and cheap paper maulta is probably the best-like the bags used for small grocery packages-and after punching a hole in the bottom with the finger, to let out water and let in air, one is shipped over each lunch, when the fruit is nearly grown, and 'astened by pinning the edges of the mouth togeth r loosely around the stem, above the cluster, thus inclosing it in the bag. Bass are also made of thin and light mos quito netting, and are by some regard d as preferable to papers, as they admit the light and air freely, and will, if exred for, ast's veral years

It is claimed that grapes thus protected ere almost entirely exempt from both rot and mildew, as well as other and less well-I fin d dis ases and insect pests; and this - nuquestionably true. But the expense and labor of this new method is too much smake it practicable for large vineyards, chile it may be a very desirable safeguard or application to a few garden or residence ground vines, or for very small vineyards of lost an acre or two; and it is for the benefit of these that this short article is written. Extensive vineyards must have cheaper and more easily applied remedies for the grapes alluded to, or get along as best they can till the periods of these grape destroyers, like those that attack other kinds of vegetation, pass away. Fortunately, thus far, our lake grape growing section of country is not alarmingly affiicted with the grapes pestilence that have seemed to render "bagging" an indispensable necessity in some other and not remote states of the union.

LABOR IN VINEYARDS.

The St. Helena Star of last week writes in relation to labor during the wine-mak ing season. The reference made to supplying better accommodations for employes at such times is in accordance with our belief, and just what we have advocated in these columns. In the great hop-growing districts of the East, each hop-grower has extra bedding, dishes, tables, etc., for the accommodation of respectable people whom they employ during the hop-picking scason-often to the number of a hundred, and more. The same will finally be true here among grape growers; and as the climate is mild, the uccessary room can be temporarily furnished at far less expense than at the East Chinese will not always pick as many California grapes as they do now. White help for such work is going to be more plentiful, and grape-growers will have it in preferance to any other; but the necessary accommodations will have to be supplied. The paper mentioned says Now that everything promises well for a very fair yield this senson, the question of labor naturally comes up. This question seems to be quite generally agitabil throughout the state at present There sums to be a scarcity of help and the shrewd Chinese have grasped the situation and are demanding an increase to their wages. This is naturally to be expected It will be remembered that although the crops were short last year, there was a

tage this section enjoys. As the vintage season comes after the harvesting of hay and grain, a large number of new can be engaged for handling the grapes but even this is not a sufficient guarantee their wife be plenty of help by any means. There is one thing which should be remodied, and that is, thellack of accommodations for hired help during the vintage season. The average laboring man is opposed to sheping in haystacks and old barns, and he is not to be blamed. It all our vineyard men should adopt some plan of giving the young school boys and girls work in our vineyards, but, as things now are, no mother would wish to have any of her children at work and so they were employed near enough to town to be at home of nights."

PECILIAR PROCEEDINGS

On the second of last March the Marguerite Winery of Fresno, consisting of two large buildings us alter the purpose of storing wines and branches, was burned to the ground. The property was insured to the agency of Brown, Craig & Co. of this city

The agents decided to dispute payment, and Morse's Detective Agency was engaged to work up the case. On the 19th of April an operative named Decay was sent down to investigate the matter. He remained in Presno and vicinity about two weeks, quietly gathering information. Upon his statement the insurance company refused to pay the amount of the insurance, and about a week ago suit was begun against them by thowner of the property destroyed, a mannamed Rogers, who swore to the total loss of the entire amount of wines and branches stored in the winery.

Deasy was again Jetailed to go to Fresno. having received an inkling that a portion of all of the wines and brandles had not been destroyed, and after a scarch of two or three days he became satisfied of this fact, and telegraphed for J. N. E. Wilson, the attorney of the company, who armyed in Fresno last Tuesday. On Wednesday, while the case was being tired in court. Densy went to a ranch, a short distance from Fresno, and with a gang of men armed with packs and shovels, on a prospecting tour. The result was, in detective parlance, a "lag hand." Barrels of wine were found buried near Roger's house, under his house, in the barn, in sheds, stored in loose hay and buried in the open field. Every place which promised a perfect concealment was pre-emptied, in one place twelve large pun cheons being found in an excavation in the open fold, over which boards had been placed, and on top of these a spainkling of earth from which a sturdy crop of grass was growing. There were found twenty five barrels of a fine quality of port, slearing and hinndy stored in the bain. Seatch was also made of the premises of Captain St. Habert, who had charge of making the wine, and in his cellar were found into barrels of brandy, three of port and a fine assorting at of sherings and clarity. In another house 10,000 gallons of win- werdiscovered, and on Thursday still other hidden stones who him aithed

Roger chas been a preminent entry to if Fresho for a number of years and has been largely engaged in the wine business.

Great excitement provals in Freshouser the supposed bearing of the disclosures.

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WINE FOR TEMPERANCE

It is such an old controversy, whether wins drinking is compatible with temperance, and it has been so hereely fought over and turned mostle out, that no new thank pamains to be said of it. But some good things and true things that have been said about it will bear bringing out and saving again. Indeed if we must sav only that which is now and to ver before said, we may as well stop the making pens and cast no more type, the present supply being more than enough to exhaust the expression of all remaining originality. For wine in immodcration we have no good word, any more than for overcating or overfasting, overidling or overworking, or any other of the numberless excesses going on about us now us they always have been, and doubtless always will be, but for wine, pure fermented grape with in moderation, we believe that a good temperance argument can be made. With to restore the failing appetite and arrest the intemperate waste of the body's strength, wine to soothe the wrung and shattered nerves, and bring calm repose to the intemperately wrought up temper; wine to chick the sinking of heart, the failing muscles, the dimming of sight, and rolling of brain, proc coling from intemperate overwork, wine to bring cheer to the soul, to drive off the black phantasms of despair, to put good will into the heart beseged by hatred, envy, malice, and all uncharitableness, and turn the cynic and hater into the friend and lover of his kind, is the remothing of temperance in this? Or is it to imperate only to spurn this gift of God, to turn away this strengthener, soother, comforter and friend of we use it as a friend, and seek the refreshment which nature demands we shall have, or die, in netve-modd-ning tea, brain and liver destroying coffee, or the seductive bitters call d by the name of temperance? Or steering between the two, is it only temperand to meist that the poor human body needs only nature's providings, and deny that it left to its own powers it must sooner or later have something of tonic and stimulus, or drift into dyspepsia or atrophy?-Cal Fr d Griners.

AN EXPERT ON WINES.

"Those wife got sensick" asked a reporter of a champagne expert.

" Certainly it does, the answered, " and it does not recover from it until it has laid amonth undisturbed in a cellar where the temperature does not vary In warm weather it requires longer rest. This is ally our firm imports as little as possible luring the summer months. Frost is also a great coemy of pure champagne, and it s dangerous to import it during very cold weather. When touched by frost wine becomes thaky and it often takes mouths for it to recover. The facilities for protecting wine from frost while in transit from Reims to the scaboard are very poor, even if the ame was not affected by the voyage.

Charets and Burgundes should rest a month to recover from the effects of a sea veyage. Blue, *ine cannot be imported at dlens summer except a 2 escand you then it need at all a large-lane imagine that charge genes is at at testimal until it can some beyond the grand has lost its sparkle. This is an absurdable. In this condition it is ready a kind of Chabba clarets, with rare exceptions, are unfit to drink after bee using ten years old." IN Y. Free eq.8 m.



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FRIDAYJULY 6, 1888

FOR SALE.

A Wine Press,

--- APPLY AT-

Office of "S, F, MERCHANT."

A FINE CELLAR.

The Livermore Herald says: A. Duvall's new cellar on his Bellevne vineyard is now rapidly nearing completion. The roof is on, and the work of cementing the walls nearly done. This is the largest collar yet constructed in this valley, being 60x120 on the ground, and three stories in height. The first two stories are of brick, and the third of wood. Mr. Duvull has two other cellars, built in the same style, but somewhat smaller. These are cemented both inside and out, and have cement floors, as will the third. Mr. Davall is probably one of the most thorough and painstaking man engaged in viticultural pursuits in this State, and being possessed of ample means, he leaves nothing undone which might be considered necessary by the most captions critic. The growth of his vineyard, orchard trees and ornamental trees and shrubs, and the sudden uprising from the midst of all. of a small city of wine cellars, resi ences, cottages, stables, tank houses, etc., have been a constant source of wonder to all who have watched the marvellous development of this estate.

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WE have sixty divisions on the dials of our clocks and watches, because the old Greek astronomer, Hipparchus, who lived in the second century before Christ, accepted the Babylouian system of reckoning time, that system being sexagesimal. The Baylonians were acquainted with the decimal system, but for common or practical purposes they counted by "sossi" and "sari," the "sossos" representing sixty and the "saros" six times sixty-360. From Hipparchus that mode of reckoning found its way into the works of Ptolomy, about 150 A.D., and thence was carried down the stream of science and civilization and found its way to the dial-plate of our clocks and watches.

ITALY is the greatest olive-producing country, 1,250,000 acres being developed to that industry, yielding 30,000,000 to 50,000-000 gallons of oil annually.

advices from wine growing centers, is as follows:

In the Bordeaux districts of France, the vines during the fortnight under review, have, on the whole, made good headway Some thauderstorms occurred, accompanied by refreshing showers, causing the budding to develop marvelously. Should the warm temperature continue, whatever delay there has been will soon be recouped. The prosp et of a good vintage has predisposed prop icters not to cling too obstinately to the comparatively high prices they have latterly to nucking. From the Pilus in particular favorable advices as to the development of the vin shave been received. Some damng, was manawhile done by a hail storm the day before vesterday, in the districts of Saint-Escenh , Saint Senrin-de-Cadourne, and the vinevards of Ambarés, the Carbon-Blanc and Sainte-Enlalie. In the white wine regions vines have also made satisfactory progress.

In the neighboring departments, the wine trade has come pretty much to a stand-still, the weather being all that could he desired. An abundant wine crop is even at this early stage looked for with some confidence.

In Germany, the month of May, during which the vines in this part of the world are frequently visited by night frosts, has so far been exempt from them, the temperature at the same time being mild enough to allow the vines to make normal progress and compensate for the lateness of the season

Seasonable weather has during the prescut mouth pushed vegetation, in Spain, sufficiently to overcome the delay a severe winter and tardy spring had wrought, so that general vintage prospects have vastly improved during the fortnight,

In Portugal the new wine crop promises well in regions not phylloxera-smitten, but the latter are in the minority since the scourge has made further headway of late

From Hungary the report comes that night frosts have been limited to a few Northern counties; elsewhere the vines have been doing tolerably well, but do not promise abundance in some districts.

EVERYTHING points to a speedy solution of the problem ever present with anxious growers, as to what we shall do with our grapes. The rapid increase noted in the yearly crops, together with the comparatively low prices which now rule, has created a bug-bear, difficult to down with ordinary argument. The experimental tests which are constantly going on in the view of utilizing the juice of the grape are many The successful adoption of any or all means the absorption of all our product, increasing though it may be year by y ar. The must process, introduced by Dr. Springmuchl, is turning out all that was predicted for it, and machinery capable of working many thousands of tons, will probably be erected this summer. Mr. Clayton, the corn spondent of the Viticultural Commission in New York, suggests the advisability of putting up this must in jars and small packages for family use. In that form a good demand will spring up, New York itself being good for at least 1,000 tons.

Another improvement which is lately reported, is that by which the must is preserved tree from fermentation. The grape is first of all disinfected of the germs of fermentation by being passed through boil- parable.

In Bonfort's Circular, the latest foreign ing water, and thence into a chamber thoroughly disinfected, where the process of manufacture is carried on, the workmen being treated to a similar course of disinfection before entering the room. It is said that this system has been subjected to a very critical investigation by several of our prominent wine men, who are satisfied that a very important discovery has been made, opening up another avenue for the disposal of surplus crops.

Another use to which the grape is put in the Eastern States, and which might be adopted with advantage in the larger cities of our State, is that of freshly expressing the juice for drinking purposes, by small hand presses fixed on the counter of stores. The pure juice is considered highly medicinal. it having been demonstrated that it reconstructs the blood, and builds up the nervous system. This will also offer a profitable outlet for the surplus product of our vineyards,

THE FOLLOWING self-explanatory letter is annexed to the annual report of the retiring President of the California Board of State Viticultural Commissioners:

To His Excellency, R. W. Waterman, Governor of the State of California,

SIB:-Herewith you will find transmitted my Annual Report for 1888 as President of the State Board of Viticultural Commissioners, together with other documents necessary thereto.

Owing to your recent succession to the gubernstorial chair through the death of the late Governor Bartlett, it is the first report you will have received from me; and as my term of office expires by limitation on the 19th of this month, it will also be the last I will be called upon to make during your administration. In view of these facts I deem it necessary, for your information, to dwell at some length on the work accomplished for the benefit of the State by this Board. This is the more necessary since, in certain quarters there exists, apparently, a determined ignorance regarding the work accomplished by this Commission, as well as a sustained endeavor to cloud the great actual value of its labors.

Respectfully,

ARPAD HABASZTHY. President of the California Board of State Viticultural Commissioners.

San Francisco, April 12th, 1888.

STATISTICAL BETUBNS for April, issued by the Department of Agriculture, give the first indications of winter grain prospects for the current season. The general average of the condition of wheat on April 1 is stated at 82 per cent, and of rye at 93.5 per cent, and it is authoritatively asserted that the present appearance of the wheat crop is not promising. The average for wheat above stated is the lowest which has been shown for ten years, with the exception of 1883, when it was 80 per cent, and of 1885, when it was 75 per cent. The prospect of a reduction in the yield of grain is not so disconraging when we consider the prevailing low prices; and if the European demand shall prove as full and ample as in the past, the higher range of values which short crops will entail may probably prove to be satisfactory and compensate for the falling off in the crop. Since the statistical state-ment was made there have been extensive freshets throughout the Mississippi Valley, and a wide area of cultivated territory has heen under water, great injury and total loss of crops resulting. Distress is inevita-ble in such sections; but there is still hope that the damage may not be utterly irre-

C. McAFEE who has been appointed Commissioner to Paris in the interests of California wine growers, is basily engaged collecting samples of wine. The matter will be brought up at the next meeting of the Commission, when it is probable some action will be taken. The general idea among the members of the board seems to be, that in face of the large display of the wines of Europe, more attention should be given by the California exhibitor to an appropriate exhibition of our raisius, brandies and condensed must.

Wines will pall on visitors in the matter of super-abundance, while the distinctive collection as suggested, will invite the critical attention of Connoisears.

RECENT BEPOBTS to the Viticultural Commission from the grape growing districts of the state, are on the whole, satisfactory. From the Sonoma vineyards they are very favorable, from Santa Rosa nothing extra, from St. Helena some reports are favorable, some the reverse while from the interior countries, the prospects for a very heavy crop are considered good. From Glenwood, in Santa Cruz County, the season is said to be very propitious, with grapes looking

THE PLANTING of the olive is progressing more rapidly all over the State, than might he credited. In nearly every section of the warmer belts, acreage is being laid out in this valuable tree. The people of the State appreciate the future value of the industry, and are evidently determined to take advantage of the low values which at present, rule in lands suitable for olive cultivation.

THE LOS ANGELES disease continues unimpeded in its course of destruction, and vineyards are suffering severely. The new plague is described by the Commission as an apoplexy of the vine, checking of the sap, under sudden climatic changes, being instantly attended with fatal results to the plant.

Fumigation is said to have originated with Acron, a physician of Agrigentum, who is said to have first caused great fires to be lighted and aromatics to be thrown into them to purify the air, and thus to have stopped the plague at Athens and other places in Greece about 473 B. C.

A LONDON contemporary says: A certain firm in the wine trade has recently issued a circular, in which it is stated that Lord -, one of the partners, is to be found in the office daily. What a blessed privilege it must be to buy one's champagns of the younger son of a marquis!

THE STOCK of sugar in four ports of the United Kingdom ou Tuesday, June 5th, was 246,000 tous, against 223,000 tons same time last year. Private accounts report the beet crop still suffering from drouth.

THE HERRIES are setting on Chas. A. Wetmore's olive orchard, which were reported so full of fruit buds, a few weeks ago. The crop is full, being all the trees should

SCIENTISTS have determined by careful experiments that a man can barely tasts 3-1,000ths of a grain of sngar, 1-1,000th of a grain of salt, and 5-10,000,000ths of a grain of strychine.

SOME SENSIBLE SUGGESTIONS

To the State Board of Viticuiture,

GENTLEMAN: - As suggestions have been invited from grape growers and wine makers, I beg to contribute the following facts and plans for the general good of our great industry.

The people of this great are essentially a religious, and no doubt like to see all their industries established on a solid basis in conformity with their religious belief. The first ministers of the Gospel in California very wisely followed their master Christ, and became the first grape growers and winmakers in our State of California, making and drinking as good wine as the old Mexican vine (the Mission) could make. In those early days they could get no bitter stocks, but as far as they could they ob yell the Lord. "Wine is the new testament in my blood; every one of you drink wine." If their successors, the reverent gentlemen of to-day would only do the same, and distribute a cup of California wine to every church member every Sabbath, the 60,000, 000 people of this Union would be all the bealthier for it, and there would a good market for all our wine, while Chustian temperance would drive "Tyrannical Prihibition" ont of the world, History tells us that when God Almighty chose the best land in the world for His chosen people he selected the land of the vine and the olive, and then turning out those savages who had disgraced humanity there, by even worse crimes than toose of the Indian tribes who formerly owned California, God planted His people as a nation of viticulturists and wine makers. He gave them special laws of viticulture, What to plant, (i. e. choice vines, &c., &c.) How to prune, (i. e. to cut out harren branches, and to pinch and thin the fruitful branches) and most important of all He ordered the vineyards to go nnproned and wild every seventh year so as to restore power to the worn and roots and to create new roots, and thus to prevent those fearful diseases, phylloxera, chlorosis, phoma, &c , &c. by using the following system which is a well-known law of all vegetable culture - (Lev. XXV),

The neglect of God's law in Europe by the half Christian people of that continent, produced, as we all know, awful disense and destruction of the vines-mainly for want of following the vincyards-and our Legislature should have foreseen the need of imparting experienced men from Europe from the great agricultural colleges there the need also of assuing simple text books for the public schools, such as an ampelo graphy, classified according to the winproducing power, and specifying the scale and aspects of the various kinds, such as Hocks, Clarets, Riesling, Burguudies, Ports, Sherry, Madetra, Marsala, &c., &c., also the great raisin grapes, and the little corinths, (miscalled currents) and then the famons table grapes that are only fit to be eaten, but will not make wine.

Then a text book on Viticulture involving of course pruning, training, grafting, planting, resistants, seedlings, hybrids, &c., &c.

Then a text book on Viniculture, giving all the special methods for the special wines

Instead of doing this they appointed your humble committee, giving you a more 1st. tance and expecting you to do work worth many millions for about \$10,000 a year Your work stands there and will stand forever nobly done, as far and farther than you could be expected to go in the Government of an industry that will be presently madness

worth untold millions and the L gislaturshould vote \$10,000 each to the found rs of mere experimental one like Berkeley, but a vincultur . For every dollar spent the Chief Executive J. H. Wheeler, Esq. | Legislature should have spent \$100, that is a inblion dollars. Let anybody travelold Samura and so long intles of vineyards totally kill d. millions of dollars thrown away, become our rulers took no stips to stop it, and left you proverless to do so. Look at the distroying angel "the vine louse," nearching across the country and running homes, blisting fortunes, withering up industries, stealing the wages of the laboring up n. figure that going on as in France, and then ask what are our rulers deing? Cultivating phylloxera?

> In oth r lands Government take steps to destroy small pex, pleuropaeum ana, an t also that worse post of all, phyllox re, " and they also quarantin infections but what steps are taken here positively none except to grow phyllox ra at Bark by to se what sort of a little thought is,

> Government has shirked all its duties and left the Haraszthys, the Wetmores, the Drummonds, the Pohndorffs, the Crabbs the K-dilers and others to lift, the industry as b st they could with next to no help at all, and without power to grapple by law with the industry. There neglect is here posday in wholesale death of vineyards that should have lived in vineyards that must be grafted to better stocks in bad winemade from grapes grown in wrong seals in vineyards in frosty mind flats, instead of on hills in chiref and book hand used for muscats and raisins, in vile poinage brand, por soning people in low saloons, in imported German sparits of rotten potatoes to max in fruit purces colored with poisons, and all this poured down the guzzles of miscrable people till our bitt r people aroused havrushed into a falsely called temperance movement, that is Prohibition. The real temperance movement is to follow Christ to make good wine and drink it every day as food, to pant chosen vines (Isaiah V.; to follow the vine yards every is venth year, so as to prevent death of the roots,

> I sugg st other steps to be taken are to found an agricultural college with professors of viticultur and of viniculture. Sond out inspectors through all California as a vinepolice and report all disease, then if a law be pass if to stamp out dis ase, cas in Australias, money will have to be voted to pay for the vines that are destroyed.

Issue the school text books as named, and support a viii) and wine gazette (is like the MERCHANT to report progress. Found a State nursery to distribute clean and noble stocks suited to such climate of California, a branch nursery at I're sno would meet the wants of Southern Camforma, and the sales from these would pay expenses. This is really a federal business. The Union will get more good by founding good vineyards and by growing wholesome wines, than by spending millions in fortification. To issu text books for the whole Union would teach the rising youth how to plant, to prune, and to cultivite all kinds of grapes, olives and citrus fruits, and to ripen wholesome wines for export.

Mr. Wetmore speaks rightly when he says vine yardists should take up, the temperance movement and prove wine is a vital food for man's body as Christ decided it to oe. "There is nothing that entering into a man can defile him, what comes out of a man that is what defiles him, for out of man's heart came drunkenness, gluttory, &c., with their ends mischief, misery and

Found also a State wine cellar, not a cellar canable of selling whole crops from diff is ni parts of the State, so as to prove the wine power of the different soils and counties and to make known our wineamong the Eastern States, Canada, England and the world

It seems to be thought by many "the bigg r the vineyard, the better the wine," History says. Good wine only grows in small lots anywhere, or " the noblest vin tages are the growth of little vin yards." A central cellar by making known choice vintages would do much to drive foreign wine out of America. I thought it best not to disturb this essay with any disputes, as the heresies of falsely called Christian temperance could be exposed - people who paint human sepulchbr white outside with Prohibition, but leave the sinful hearts all untouched within.

Hoping these suggestions may help you and our California industries. I am Gentle-

Yours truly,

J. W. TREADWELL.

FALCONHURST VINEY VID.

SONOMA COUNTY, CALIFORNIA,

[P. S.] This mail tells us that the Province of Victoria has just quarantined all fruits, vines, grapes, &c. from New South

THE MARTINEZ WINERA.

Although the meeting called for the discussion of a winery last week, did not draw as large a number as was desirable. a full interchange of views was had, and it was plainly shown that the enterprise was one of the necessities that circumstances will soon force into existence any way Probably a thousand tons of grapes will be produced in the immediate vicinity of Martine z this year, a large portion of which must be converted into wine. The local wineries will absorb a portion, and the rest will be sold away for what they will bring, unless a plant is soon started here to furnish a market for them. A committee was appointed at the meeting to prepare the papers for incorporation, and submit the same for subscriptions. Messrs L. C. Wittenmyer, James Kelly, H. Ranp and U. A. Smith form the committee, and no better selection could be made. A cooperative winery, and eventually a cannery and other branches naturally growing out of it, is the most promising industry that has yet been suggested, and it the people of Martinez realize its importance to the town, there will be no such word as full this time.

Australian Incubators.

In Australia and the neighboring islands are seen many barge mounds of earth which were formerly supposed to be the tombs of departed natives. These remarkable tumuli, reaching as much as fifteen feet in perpendicular height and sixty feet in circumference at the base, are not the work of man, however, but are now known to be the membators built by the jungle fowl and other species of the small family of megapodalæ, or great footed birds. Each of these great piles consists of fallen leaves, grasses, etc., which the birds deposit in place by throwing backward with one foot Though the mounds are usually in dense shall, the decaying vegetable matter has been found to raise the temperature at the center as high as 95 degrees. The eggs are carefully placed with the larger end up, about twelve inches apart, and are all covered to a depth of at least two or three feet. first yete for Fresident next November.

THE FUTURE OF CALIFORNIA.

A reporter on the Los Angeles Tribune took occasion to interview Hon, Blanton Duncan, of Kentucky, during his visit there, and here is a part of the talk

In the next decade intilions will come to the Pacific slope, unequaled in its climate, its soil, its varied productions. In my travels I have seen nothing to surpass it. California is an empire in itself, perfectly independent of all the world, and will be able from its own resources, to cope with any nation on the globe. It is almost like the flash of Aladdin's lamp to witness the won l-rful transmutation and development of the just three years.

While many northern localities are icebound, and the marrow almost freezes in one's bones, here at this season, in the open mr, flowers of most gorgeous hue and variety, and magnificent trees, equal the tropics in profusion.

Strawberries, binons, oranges, canliflowers, peas, and every description of vegetables are daily gathered in the fields. Fomato's grow into trees in some localities, and continue to bear their fruit, regardless of season or a cessity of replanting The orange trees, loaded with fruit, are also covered with blossoms. The thermometer ranges from 65 in the day down to 35° at moht.

This generation will witness an impour, which will prodably make California the empire state. New York will soon be brought within four days of San Francisco; and families with moderate means will leave Siberian atmosphere for one which far surpasses the Italian Riviera, or any other European resort, which during this century has attracted the richest of land. There is room for 50,000,000 people on the Pacific slope, with a development of material wealth and resources sufficient to keep pace with any influx, which the whole power and capacity off all the Pacific lines may be able to transport.

SOME ENORMOLS SALARIES.

Some interesting figures in regard to salaries have been elicited in a suit now in progress in Brooklyn against a bakingpowder company. It was shown that the president of the company draws a salary of \$50,000 a year, the vice-president \$30,000, and the treasurer \$6,000. The president of a paint and variash company, who was introduced as an expert in regard to salaries stated that the superintendent of his company r ceived \$50,000 a year, while the yearly business did not exceed \$3,000,000. Another witness stated that in companies with which he was acquainted, the chief executive officers received from \$5,000 to \$50,000 a year, while a representative of a kerosere cal company said that he knew one officer of a large corporation who received a salary of \$30,000 a year, and two others who received \$20,000 each. These figures up energious, and sore unknown until the days of trusts and combinations. The explanation is furnished in the testimeny of one of the witnesses, who said that the business of the company with which he is connected had been increased until the profits had reached 450 per cent, on the original capital stock Bultimore Sun,

THE TOTAL Vote of the United States in 1554 reached 10,118,061, but for 1888 the total is expected to pile up close to 11,000,-000. The larger fraction of the expected merease of 1,000,000 will be composed of native born young men, who will cast their

OUR BY SEA. WINE SHIPMENTS NATIVE

PER P. M. S. S. CO'S STEAMER COLIMA, JUNE 30th, 1888.

TO NEW YORK.

	1		- 1	
MARKS.	SHIPPBRS.	PACKAGES AND CONTENTS.	GALLONS	VALUE
	. I tiunulach & Co	70 barrels Wine	1 1140	81.920
1.1		10 puncheons Wine i	1,943 7.230	2,49
V Co		150 barrels Wine	6,230	2.90
D & Co		140 barrels Wine		36
A		25 barrels Wine.	1,276	42
B, in diamond		4 half-puncheons Wine	251	19
<u>L</u>	C Carpy & Co	10 barrels Wine	511	17
Z		60 barrels Wine	2,940	1,17
in diamond	-1	1 half barrel Wine	26	-,-i
. "		10 barrels Wine	486	19
P		5 barrels Wine	245	18
B		25 barrels Wine	1 213	62
9		3 tarrels Wine	1.213	8
н с м		75 barrels Wine	3,760	1,56
0 & Co		150 barrels Wine	7.446	7,44
in diamond		3 cases Wine	1,930	1,33
В W	0.15		4,630	2,30
y Glark	Cal Transfer 1 o	78 barrels Wine	4,000	2,00
& Co	S Lachman & Co	3 half-barrels Wine	178	10
_ ''	- " "		2.678	95
P	Trapoli, Berge & Co	56 barrels Wine	188	33
••		4 barrels Brandy	100	65
R P	Williams, Dimond & Co		10	٠,
<u>s</u>	1 ::	1 keg Wine	10	
S	4	5 half-barrels Wine.	2,236	1.00
	1 ::		2,236	53
	1	11 packages Brands	1.022	42
8 & Co	-1	25 barrels Wine.	1,022	42
& Co	- 1		720	36
W J H	1 "	17 barrels Wine	720	30
Total amount of Wine	3 cases and		51,237	826.01
Total amount of Brand	o caece mia		456	87

TO CENTRAL AMERICA.

E M P, Acajutla	Cabrera, Roma & Co 11 barrel Wine	30	20
J A O, Acajutla		40	30
A V, Acajutla		100	75
S S A, Acajutla	" Prases Wine		103
M A V, Acajutla		52	27
R O, Coriato	Sperry & Co 4 cases Wine	10	18
C B. Acajutla	Montea egre & Co 1 keg Whiskey	10	25
R D G. La Libertad			36
TC, La Libertad		70	65
,	1 keg Whi-key	30	115
J L. San Jose d Qunt	J Gundlach & Co 2 half-barrels Wine	55	43
H I, Acajutla	B Drevfus & Co 2 barrels Wine	100	140
A C D, Acajutla	5 half-barrels Wine	135	120
A Z & Co, Acajutla	Kullman, Salz & Co 2 kegs Wine	20	12
F S, Champerico	Eng de Sabla & Co 6 kegs Wine	60	46
Total amount of Wine,	4 cases and	670	753
Total amount of Whisk		40	140

TO MEXICO.

ŕН	Mazatlan A K Stevens (1 barrel Wine	50	
B E B H	Thannhau-er & Co. 20 cases Wine Gutte 3 casks Wine	180	113
	Total amount of Wine, 31 cases and	230	

TO PANAMA.

L F Lastretd.			*40

MISCELLANEOUS SHIPMENTS.

DESTINATION.	VESSFL.	R1G.	GALLONS.	VALUE.	
New Zealand	**	Steamer Steamer Steamer	790	150 40 220 10 574 671	
Total			2,774	\$1,005	
Total chimmonts by Ber	ana otromora	79.19	7 mallone	297.035	

Total shipments by Panama steamers Total Miscellaneous shipments	72,187 gallons 2,774	\$27,035 1,605
Grand totals	74,911	\$28,640

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VINEYARDS

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THE VINE AND ITS FRUIT.

(Continued from page 86.)

In continuation of the subject in the latest issue of the Vineyardist, Dr. Me-Carthy says:

The Greeks and Romans worshipped the god of wine under the name of Bacchus or Dionysus. In these fictions he was regarded as the son of Jupiter and Semele a daughter of Cadmus. These ancient people escribed to wine a number of offices and related very many achievments, which he is said to have accomplished. Among the things for which he was celebrated were his advancement of morals, legislation and commerce. He, too, was a cultivator of the vine as well as a patron of the honey bees. Nor was that all-he was renowned for his military expeditions in the distant Indies, with an army composed of men and we men. The worship of this mythological divinity originated very early it is thought in India. In his numerous marches he is supposed to have extended the cultivation of the vine; hence to him the grape vine and the ivy were especially sacred. Gosts were offered in sacrifice at the ultur of Bacchus, because they were injurious to the vine. But alas! Bacchus was not the god of virtue and sobriety surely for the festivale which commemorated him among the Greeks and Romans became wild and licentious orgies, and were finally on that account abolished in Rome by the Senate in the year A. U. C. 568. The oldest representatives of the god Bacchus are much more dignified than those of later times. By the poets and artists of antiquity he was exhibited as a handsome boy, resembling a female in natural refinement of expression; but in after times he is found represented with swollen cheeks and bloated body, and after crowaed with ivy and vine leaves, holding a wine cup in his hand and attended by a panther. Sometimes he appears holding in his hand a cluster of grapes. At another time he figures in scripture and bas-reliefs as a bloated young man borne by satyrs and attended by cupids and Bacchanals, and then ngain he is seen in chariot drawu by tigers and leopards or panthers. The moral of this old mythology seems to be that in the handsome boy Bucchus, the vine and its fruit are represented as harmless and nourishing, but in the bloated young man

drawn by tigers harnessed to his chariot, we have the bad side of the vine business, a side which every one admits to be possible. The Greek were great cultivators of the vine. It is true that as a people, they lived simply; especially is this statement true of the Lacedemonians who were so frugal that they would not allow among them professional cooks. The Athemains also lived moderately, but perhaps it was because of the unfruitfulness of the soil of Atica. With them, water mixed with wine was the common heverage. The Greek word which is used to signify a drinking cup is one that means to mingle, which clearly shows that they mingle something with the water they drink. There were in use among them two kinds of wine-the strong, which would bear a large dilution with water, and a weaker kind, which was used unmingled. To drink the numixed (the strong) in their common parlance was 'to drink like a Scythian." They used also the sweet unfermented juice of the grapethe mustum of the Romans-the Glenkos of the Greeks. A drink was prepared by them which was an unfermented wine inspissated by hoiling. The Greeks, though more temperate than the Romans had of wines a great variety, whose names and quality were derived from the localities where they were produced. Besides they imported wines from Asia and from Egypt, And no gentleman's residence was considered complete which did not have its wine cellar. We speak of this not to commend their wive drinking and drankenness, but to show how long ago the grape was raised and used.

The Olive in California.

The extensive cultivation of the olivs in California promises to make the State as noted for its productions no the countries along the Meditterranean. Thousands of trees are already in bearing, and every year sees the number augmented. The making of oil is already a considerable industry, and the local product has almost entirely usurped the place of the imported pickled olive in Celifornia markets. In a few years California olives and olive oil will excite as much ettention in the East as our raisins and wines do at present-Oceanside Journal,

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TREATMENT OF MILDEW

At the National Viticultural Conv. ntion. held at Macon, France, in October, Mr. Battanchon presented a r-port on the treat ment of mildew in 1887, from which hdrew the following concinsions.

- 1. The meteorological conditions which have accompanied or followed the treatments have undoubtedly played in important part in the results chtained.
- 2. The influence of these conditions is more or less important according to the attation, exposure and care of the soil in the vineyard: the better the will, the better the vineyard, in elevated locations exposed to the winds, the better are the conditions.
- 3. Preventive treatment ought always to be recommended; following the local and climatic conditions, they should be made towards the end of May, and in all cases before the 15th of June.
- 4 In order to insure good results it is necessary to repeat the treatments at least three times, when the conditions are the most favorable, and often four or even fivtimes.
- 5. Ean celeste of various strengths Bordeaux mixture either according to the old at new formula, the simple solations of colpate of copper or those containing curbonate of soda, should be further experimented with before we can pronounce upon their relative values.
- 6. From experiments already made, it sppears that the sulphate of copper in the solutions should not be reduced below a certain per cent. Beginning with weak solutions early in the season while the caves are vet tender. Later when the eaves are fully developed, and in consequence, more resistant to the can-tie action of the copper sulphate, solutions containng a greater per cent. of this sait may be used.
- 7. Finally, whatever may be the liquid mplayed only good spraying machines or sumps should be used to apply them.

FROM F. L. SCRIBNER U. S. MYCOLOGIST. Communications from Mr. F. L. Scribner I C. S. Mycological department.

"In an article published in Le Pergres Igricole et Viticole April 29, 1888, in an rticle entitled "The Mildew, Black-r d nd Cootnibyrium in 1885 " M. Degreilly, ne director of the journal, says: From th ports which I have received, it apprars

- 1. That in 1887, liquids have, in general iven better results than powders.
- 2. That in the south-east, the process hich, with few exceptions, has given the est results in eau celeste,
- 3. That, in the region of the south-west e Bordeaux mixture holds, in general, the rst position.

That, in resume, can celeste and the ordeaux constitute two excellent process, s trealment.

The efficacy of both these processes is neidered as absolutely demonstrated, and is thought that, when properly applied ey aught to give everywhere, nearly ual results

The value or efficacy of the powders is a estion yet to be determined.

In giving the formula for east celeste. M grally adds in a foot note (p. 566,1 +At water) pour in the ammonia, a little at llarly known

a time, make all the copper is precipitated The original is then turbed and of a If at bire pior, all water several gains well t stand to settle. Then pour off the clear lepud which contains subphot of comming the compound which causes the burning of the leaves. Then pour wirths prosperate a from the wood enough liquid connection besides it. The result is of a clear bountful dopoblus. r. Dout this with water to make 22 Among the processes which have not been applied on a larger scale but which are inter-sting to try is the animonical earliersts of copp r, solution propos 1 by M. Fostme in Program April 18 2nd Vol. of 1887 b 114 Carbonate of optor is a very fine and light given pow der which manufacturing chamists can furnish chaply red in abundance to viticulturists. The proporation is made fillows. In a two spirit both, furnished with a sessitting stapper, put I quart of liquid run, his, and it zof earhonate of oppor shifts will, while the carbonate will dissolv in the amminute a forming liquid of a b suitful deep blue color. When required for use dilutes to 22 gallous

The adventages claimed for this propera-

- 1. Extreme case of preparation.
- Perfect aller nee, even greater than that of our colesto

In an imenting one may increase the amount of the carbonate of copper to 6 or even twolv oz Formula of M G Perbeyre. Process Ageleoic 1887 and 1888 1st v d. b 365

In one v ssel histoly a 2 lbs, of sulphate of copper in a gale in of water. In another vised dissolve I lb, of curbonate of soda in a gallon of water. Mix the two solutions and libite to 41 gillous.

Formula of M. Massons,

1st. 2lbs, sulphate copper, 2 lbs, carhomate of soda, 22 gallons of water.

2nd, 4 lbs, sulphate of copper 8 lbs Dissilie the sulphate in 2 or 3 gallons of hot water and while the solution is yet Warmy and the crystals of soils little by little. Dilute when required for use,

CHARLOTTESVILLE, VA.

Por H. L. Lacon.

DEAR SIR. Your favor expressing willinguess to repeat the experiments of last year in the treatment of grape diseases is at hand. The remedies to be experimented with are can elleste, bordeaux mixture and sulphatine.

1. Eve - st. 1 lb. sulphate copper, 11, pants liq a l'ammonia, 22 gallons of water 2nd, Excesse, 1 lb, sulphate of copper, I lb or linary carbonate of soda, I., pants of ammonia 22 gollons of water

Dissolve the sulphate of copper in a gallon of water, in another vessel dissolve the carl onate of soda, then pour the two solutions together and when all chemical reaction has coased, add the ammonia dilution, 22 gillions with water when required for use

Bords any mixture 1 Sulphate of copper 2 lbs, hm. 4 lbs, water 22 gallens.

What Are You?

Put d while figures the year in which first treatment, which is made while the you were bern, to this add 4, then add your Ten are very young and tender, can are at your next birthday, provided it comes ests has sometimes occasioned slight; leftre January I, therwise, your age at raing of the foliage. One may avoid last birthday, multiply result by Leon, from a by preparing the compound in a differentials deduct 077,423, substitute as A for I. manner: After having dissolved the B for 2, C for 3, D for 4, &c. The result phale of copper, (1 lb. in a gallon of will give the name by which you are popu-

MINCLE FORMING FOOD.

"What is the best food for producing This question of our correspend at is a legitimate one. Some foods are particularly muscle-formers, others produce fit, and still others brain and nerve, while most of the common articles of dit combine these uses in varying legrees.

But the question, to cover our entire physical needs, requires to be broadened into this: What combination of food will best nourish the body. Even then the answer must be modified to suit individual cases. For the digestive power diff rgreatly in diff-rent persons. Moreover there is an interdependence between th liff rent boddy organs and ussues, so that the body must be built up as a whole. If me part lacks, the whole suff rs, and if on part is overfed, the others will be

Thus a person who becomes unduly fat, loses in muscular fibre, either in quantity or quality. One who overfeeds the brain loses in muscular strength. So, too, must four s, made four-tenths of the cent per cular development may be carried to such -xcess as to impoverish the brain, and also to reduce the fat of the body below what is necessary both as surplus food laid up for ineal, reduced from twenty to fifteen per emergencies, and as a protection against sudden changes of temperature.

The best food for producing muscle, therefore, must, while being duly appetizing contain a large percent. I of mirates for the muscle, .2 of phosphates for the brain and nerves, and (3) of carbonates for the fat.

Of the first-class, the nitrates, beans stand at the head at twenty-four per cent., then peas at twenty-two; cabbage and salmon at twenty; oats at seventeen; eggs and veal at sixteen, and beef at fifteen.

Of the second class, the phosphates, salmon stands first at seven; then codfish at six; beef and eggs at five; beans and veal at four, and cabbag , peas and oats at three

Of the third class, the carbonates, butter eighty; corn and tye at seventy-two; wheat at sixty-nine; oats at sixty-six peas at sixty; beans at fifty-seven, and cabbage at forty-six

Fresh codash fried in fat or served with butter gravy about equals beef in all respects, and so do eggs fried in fat Boof with cabbage makes a very intritious dist But we must add

- 1. The mere eating of food can not make muscle. The muscle must be called into vigorous daily exercise, yet without over-
- 2. Excessive eating is weakening, and must be avoided. It is the amount digested and assimilated that tells, not the quantity taken into the stomach.
- 3. All the laws of health must be steadily observed .- - Ex-

TARIFF BILL AMENDMENTS.

The following is a complete list of the were stricken from the free list. Gine give it a push = Er

gelatine and all similar preparations, fish glue rusin dass, he rice pince, bone black, ivery block, drap black, bone charcoal, china clay or kacline, plums, fruncs figs, batters, fors not on the kinds in blocks, rough r squard paster of paris when ground or con I, paintings and statuary. These articles were restored to their present duties except in the cases mentioned below. The duty in hearing paste or rolls is raised from four cents on the tall to five cents a point les na lice rice juic l'ut at 35 per cent ad velocem on kaoline, crude, rated to \$1 per ton on china clay or koahip, wrought, \$2 per ton, on green and colored glass lettles, vials, demijohus, politic or preserve pars and other plain, undded or pressed green or colored bottle glass not cut or painted, raised from threefourths of a cent to one cent a pound; on unpoinshed cylinder, crown and common win low glass larger than 16x24 inches. raised from one and one half to two cents a pound, on slabs and billets of steel, restored t \$17 a ton, on from or steel with longitudenal ribs for the manufacture of pound; on wood scrows, rester d to pres. out rate, on new type, reduced to fifteen per cent ad valerem, on most dour and rice cent and valorem, on longing for cotton. composed of flax, hemp, jute, gunny cloth changed from fifteen per cent ad volorem, to three-eights of a cent a gound, on carpets, increased from thirty per cent to forty per cent ad valerem on card clothing, increased from fifteen to twenty cents per quare yard, on maha rubber fabrics, india rubber boots, restored to present rate, and on marble, increased to forty cents per cubic foot

A NEW INTERPRISE.

The people of Mesa Grande are about to start a good and profitable enterprise. They have organized a company, or have formed a corporation, to build a winery and fruit canning establishment. Already \$10,000 has been raised, which is nearly half of stands at the head at one hundred; rice at the stock to be subscribed. This enterprise is what we call business. It is just what we need in these mountains, and the people here have started the ball rolling. For fruit these mountains have no equal-all kinds of fruit grow here without irrigation, and its flavor is far superior to that raised by irrigation | N w. + v- ry front grower ought to take stock in this enterprise, for it directly or indirectly interests every person in these mountains, it is better than gold mines, for it will be everiasting, such a corperation will establish a market, this market will bring us more wettlers, and then we will rank among the prosperous. Fruits and wine will always have a market, and these mountains can produce enough fruit to feed militaris of people. It will only be a matter of time when there will be three or four such establishments located in this section of the country. Prople are already docking in here buying land, and their main objet is fruit raising. This year these mountains will be represented at all amendments made to the Tariff bill by the the Southern California fairs, and the world Democratic caucus. In view of the reso- will be astonished to see what fine fruit can intion adopted which binds all Democratic be raised in San Diego county. So everymembers to vote only for these amend- body buy steck, if it be only one share, ments and such additional ones as we are every little helps, and before many years recommended by the Ways and Means we will enjoy prosperity, and the territory Committee, the list is an important one, of the mountaineers will be one of the finest There were added to the free list. Bags of spots on earth. We have the finest soil, jute for grain, Faris green, nitrate of soda water, climate and everything to make a and German looking-glass plates. There country. While the ball is rolling let us

OLIVE CULTURE AT CAPAY

In the near future the olive and olive oil industry will be a prominent one in this lovely valley. All of the conditions necessary to the production of this most important article of commerce in perfection are found there. It will not be an exp rim nt, for olive trees may be sign glowing in many parts of the valley to day, and there is no spot in the world where the climate is more congenial. What can be done in the way of olive culture has been demonstrated in differ nt localities in the State, notably in Santa Barbara county, by Mr. Elwood Cooper, who has there a grove of 6,000 trees that yield him annually 5,000 bottles of the finest oil, which he sells readily at \$1 p r bottle, equal to \$50,000 or \$1,000 per acre, there being usually about 125 trees to the acre. There are instances where the receipts for an acre of olive grove in California have reached \$2,000 What has been done in Sauta Barbara county can be done in Capay valley, for there is nothing lacking to secure the same, if not better re-

A PERMANENT INDUSTRY.

When a olive industry is once established in a country it becomes a permaneut one, and is capable of supporting an enormous population. In the country bordering on the Mediterraneau it employs the industry and furnishes the entire support of millions of people.

The touching story of the flight of the dove from Noah's aik proves the existence of the olive tree in the earliest period of the world's history. It was saved by the Almighty from the destruction of the deluge and a branch of it was carried by the dove to Noah as a token of forgiveness. It was a celebrated tree among the ancients and held the first rank in th ir mythology, Minerva taught the Athenians how to prepare the fruit, and they had a most religious respect for it. The Romans used the wood not only as fuel, but on the altars of their gods as an emblem of peace.

PROPAGATION AND YIELD.

The olive tree belongs to the jasmine family, with evergreen foliage and blossoma in clusters. It can be propagated in many ways, but the best way is by plant ing the seeds. This method is rarely followed in this country, however, as it grows readily from cuttings, like the willow, and will bear in eight or ten years. From this time forward the yield increases with the growth of the tree, which in favorable soils grow to immeuse size. There are many olive trees standing in European countries to-day which are over a thousand years old and still bear fruit. In France the yield per acre is calculated at about 1,250 gallons. Judging from the crops picked from the young trees in California it is fair to assume that owing to a more even climate and superiority of soil the yield will be much greater here than in France, when our trees have reached maturity.

In Italy, Spain and the south of France there are 8,000 acres devoted to olive trees, and about 180,000,000 gallons of oil are produced, to say nothing of the immense quantities pickled. The oil made in France reaches 100,000,000 gallous annually, of which 500,000 are imported annually into the United States. In California there were only about 1,000, acres in olive trees up to the present season, when the area devoted to this fruit was largely increased. It is only a matter of time when little date-palms he had, and now they are ferment.

olive culture will become a leading industry on this coast and yield an immense profit | feet high. No animal could get through to the producers.

TRICKS IN THE WINE TRADE.

Two Parisians named Berard and Fourcade have just been a ntenced to six and twelve months' imprisonment, respectively, for having practised a series of very ingenious frauds on keepers of public houses in the metropolis. They were in the habit of visiting the landlords and offering them barrels of excellent wine at greatly reduced prices. The liquor which they gave the publicans to taste was superb and the bargain was generally concluded on the spot. A few days afterward the unlucky dealer found that the wine which he had bought was detestable. Since their conviction the men have made a full confession. Berard used to keep a small bottle of good wine up his sleeve, and when he made a pretense of filling the glass from the barrel he was in reality giving his customer the contents of this hottle to taste. The trick was carried out with considerable address, and was never detected by his dupes,

Another "dodge," to quote his own expression, was to pour into a barrel of 200 litres, forty litres of first-class wine. The remainder of the barrel was then filled up with water, slowly inserted by means of a pipe. The wine remained at the top, the barrel was pierced high up, and the buyer was again persuaded to taste the liquor to show there was no deception. Delighted with his bargain he put down the money then and there, only to discover after a brief lapse of time that he had been cheated outrageously, -- Cor. London Telegraph.

THE SANTA CRUZ VINEYARDS.

The Courier Item says: In company with J. B. J. Portal, the well-known viticulturist of Santa Clara county, an investigation was made last week into the condition of the grape crop of the county. By inspection and inquiry the status of the greater portion of the vineyards of the county was ascertained, and we are pleased to report that '88 in Santa Cruz county promises a good viutage. Mr. Portal places the viutage prospect as "fair." Our personal opinion is that the crop will be better than his estimates.

Comparatively speaking, there is no evidence of damage by the winter's frosts. The young vines promise well in every vineyard. There is still some possibility of loss from coleure, but taken altogether the grape growers can look forward hopefully to the vintage.

There is at present about 100,000 gallons of wine on hand in the county, of last year's production of excellent quality, and each year confirms the prophecy made years since in these columns, that for wines of the Bordesux type, Santa Cruz would one day be famous.

DATE PALM FENCES.

We have avenues of date-palm in this State, notable the one on Col. Hollister's place at Santa Barbara, but we are not aware that any one has tried setting the plants closely enough together to form a fence or hedge, and yet this has been done in Florids, and a writer in the Disnotch of Jacksonville, says: "Mr. J. C. Thorpe of

something like two feet in diameter and ten the line. Their exquisite, creamy white blossoms have appeared for one or two years past. Think what a sight a close row of those palms would be, one pushing this way, another that in the upward struggle for light and air." It would be easy to try it in this State. All it needs is patience to wait for them to grow. The plants can be easily secured in quantity by planting the seed of the commerce in boxes of sandy soil. If kept moist, they germinate readily, and in the warmer parts of the State they grow quite rapidly. They should be potted off separately, and planted out a year or two later.

Wrongly Named.

The tuberose is no rose, but a species of olyanth.

Pompey's pillar had no historial connecion with Pompey in any way.

Cleopatra's needle was not erected by the Egyptian Queen, nor in her honor, Whalebone is not bone, and it is said

not to possess a single property of boue, Turkish baths did not originate in Turkey, and are not baths, only heated cham-

German silver was not invented in Germany, and does not contain a particle of silver.

Black lead is not lead at all, but a compound carbon and a small quantity of iron.

Brazilian grass never grew in Brazil, and is not grass; it is nothing but strips of palmleaf.

Burgaady pitch is not pitch, and does not come from Borgundy; the greater part of it is rosin and palm oil.

OVERLAND WINE SHIPMENTS.

The shipments of California wine overland in the first five mouths in the year. reduced to gallons, were as follows:

		Jan. 1 to
	May.	May 31.
San Francisco, galls 1	89,913	1,240,549
Oakland		1,251
Los Angeles	33.929	258,354
Colton	71	3,649
Sacramento	50,618	185,077
San Jose	9,902	56,212
Stockton	247	3,125
Marysville	10	510

Calling the overland shipments 40c per gallon, we have the following as the money value of this branch of our export trade for the first five months of the year:

.....285,160

1.748.727

Total galls

Quantity.
By sea, gallons 1,447,507
By rait 1,748,727 \$637,211 694,491

\$1,331,702 Total-,3,196,234

A Woman Imprisoned for Debt.

The unusual spectacle of a woman imprisoned for debt is seen at Bangor, Maine, at present, for the first time in many years. Thomas C. Stevens, a lawyer at Newport, had a lady client with whom he failed to settle, and therefore took out an execution. and on Friday morning imprisoned her in Bangor jail, putting up cash for several weeks' board for her. The woman is a widow, comes from Etna, and declares she is being wronged and swindled, and will live in her present abode for years if necessary, rather than pay more. - Ex.

A PATENT has been granted in England for the manufacture of Vinegar from tomatoes. The fruit, when ripe, or nearly so, is reduced to a pulp and steeped in water for Sanford, then of Orange City, some ten twenty-four hours. The liquor is drawn years ago, transplanted into a row some off, angar added, and the whole allowed to

AERIAL TELEGRAPHY.

According to Professor Gould's invest gation, it appears that aerial telegrap wires on poles, transmit electricity at th rate of from 14,000 to 16,000 miles p second, and that the velocity of transmi sion increases with the distance betwee the wires and the earth, or, in other word with the height of suspension; and the sulterranean wires, like submarine cable transmit with reduced rapidity. Again while wires suspended at a feeble heigh are known to transmit signals at a velociof some 12,000 miles per second, those th are suspended higher give a velocity from 16,000 to 24,000 miles. Wheatstone claim of 258,000 miles in his experimen appears never to have been confirmed.

The Vine Hopper.

A very simple, inexpensive and efficie remedy may be found in the use of conce trated lye. Vineyardists in the north 1 using lye with uniform success. It is: commended that two small cans of conce trated lye be thoroughly dissolved in for gallons of water, and the mixture apray upon the leaves and stalks of the vines, a being taken that the spraying be not do so as to break or injure the foliage hy force. The work should be done hefe sunrise or after sunset. By placing a h rel upon a light hand eart it would be ; easy matter to spray many acres in a fe hours, and at very inconsiderable expen-

WE are indebted to the Weekly Con; tioner and Baker for the following: "Male raisin statement, crop 1888-Stock on hel April 30, 13,000 boxes; received dure May, 2,340 boxes; total 15,340 boxes, Strit on hand May 31, 12,000 boxes; distribut during May, 3,340 boxes. Malaga rais on the way-By steamer via England,) boxes. Valencia raisin statement, crop 18. Stock on hand April 30, 60,000 boxes; ceived during May, 35,250 boxes; tel-92,350 boxes; stock on hand May 31, 59,5; distribution during May, 35,350 both Valencia raisias on the way-By stear'r from England, 10,500 boxes.

BITS OF SCIENCE.

Mr. John A. Baharie has invente's novel life-saving raft, espable of suppling ten or twelve persons. It is comped of very light materials, and folds up in a a very small compass, so that it requir minimum stowage space, and can alves be kept at hand ready for immediate 🆫 It is self-opening, spreading to its full exit immediately it touches the water; it shid prove of special vlane in excursion id other passenger steamers, where sufficit boat accommodation is really impract-

An ingenious application of photogray has been made at the Chancelade quark near Periguenz, where an accident occuid caused by the caving in of the wall. persons were imprisoned in the rocks, id no means were at hand to rescue them. find out where they were, a shaft twis inches in diameter was bored, and in this was slid a tube, near the end of wh was a small photographic camera, rounded by a hattery of electric light The camera moved on a point so theit could be moved up or down by pulli . cord. With this apparatus a numb of good negatives were taken. - Amsteur 10 tourapher.

ALLEGED FRAIDS IN OLIVE OIL

Secretary Lelong, of the State Board of only two were found to be pure-these from the Rancho Chico and from the Cooper farm, near Santa Barbara

heated. If the oil is pure, it solidifies into ated with lard and cotton-seed oil, it hesolidify. Of the samples referred to, one that is retailed at 65 cents a bettle is pure cotton-seed oil; another is 60 per cent of that article, another is only one-quarter pare oil, and a fourth is composed of peanot and sesame oils. All of these oils are made in the State, and sold duly in the local market and are shipped East in large quantities. Two firms here keep brands of at the same time keep on their shelves a bottle of the same quantity.

It is suggested to housekeepers that a of the vines. - Eural Californian. good test for olive oil is to place the bettle in the ice-chest over night. If it is impure, it will be of the inconsistency of butter in the morning; if pure, there will be no change in its appearance.

The names of all the tottlers of this impure oil will be submitted to the Board by Secretary Lelong, and a special committee will be asked for to take the steps necessary to break up the traffic in the impure article. -S. F. Chromicle

THEY WOLLD MIX IT.

Louis D. Combe, the well-known grape grower of San Jose, has, by his attorneys, Crandall & Biddle, files a complaint against the Santa Clara Valley Co-operative Wine Company, in which he alleges that in August, 1557, the defendant entered into an agreement with him by which he sold to the company his entire grape crop for that season and delivered to them in good order 120 tons of diff rent varieties, for which he was to receive payment at the rate of one dollar a ton on each cent a gallon the wine made from the grapes should be sold for.

The defendant contrary to the terms of the contract, mixed the grapes with a large quantity of grapes of inferior quality and different kinds purchased from other parties and mixed all the wine made from plaintiff's grap s with a large quantity of inferior wine, so that the average wine made by the defendant, when mixed with wine from plaintiff's grap, s, was much inferior in quality to the wine which the latter's grapes would have made. For instance, the Cabernet wine would have been worth 35 cents a gallon and he would have been entitled to receive \$35 a ton for them, and for the whole amount, \$1,448.21. The Ploussard would have brought him \$635 22; the Petit Pinots, \$251 19; the Zinfandel, Grenache and Mataro, \$980.97, making a total of \$3,315.65 that would have been due him. The company paid him \$2,272.95, and he sues for the balance, 1,045,70 and interest thereon from November 1, 1557.

THE VINES throughout Algeria have been thriving, diseases of a disquieting nature are not reported

Grapes should be most thoroughly cul-Horticulture, and Professor Hilgard, of the tivated this month, carefully suckered and University, have been recently engaged in pruned and sulphured. There are two investigating certain alleged frauds in the methods of sulphuring advocated. One is manufacture of olive oil, and have attained to dust the sulphur into the leaves when results which amply sustain the charges they are wet with dew. The other is to made. Out of seven samples analyzed, dust the sulphur into the ground under the vine on the windward side, so that the rising fumes caused by the heat of the sun will rise through the vine, permeating all The test is made with nitric acid, a small parts of it. As sulphur is cheap, and there proportion being put into a pan and slowly is no danger of using too much, both methods might safely be adopted. Sift a little a golden or straw colored mass. If adulter over the vines and a little under. This would make a sure thing of it. Where there comes a dark-red liquid and will not is any danger from mildew, we would recommend two or three times during the sea son, say in May, June and July. My motto for summer pruning is little and often. Never shock the vine by cutting off too much of the leaves, which are the lungs of the plant. When the vines have attained a few leaves beyond the last bunch of grapes, go through with a sharp sickle or butcher knife and clip the ends of the vines. This oil that are 60 per cent, or more pure cot. will deflect the flow of the sap into the fruit ton-seed, retailing at 60 and 65 cents, and arteries. When the laterals have attained a few feet in length treat them in the sam other oil of known purity that brings \$2.50 way. Go through your vineyard several times during the season, clipping the ends

GRAPE-SEED EXTRACTOR

A simple and serviceable implement for extracting the seeds from grapes before eating them, and which may be made in quite ornamental patterns, has recently been patented. It has a dat pick, with a sharpened point on its end in line with the handle, a cavity in its top face, and a cutting blade projecting laterally from the pick, its point forking out therefrom a short distance within the point of the pick. The top of the grape can, with this utensil, be quickly saced off by the cutting blade, so as to uncover the grape seeds, when, by introducing the flat pointed pick beneath them, they can be readily received in the cavity and removed without injuring the edible part of the grape

San Francisco Savings Union. 532 California St., Cor. WEST

POR THE HALF YEAR ENDING WITH THIR ticth June, 1988, a divide of has been declare the rate of four and one-half. By persont per form beposits and three and three fourth

Dividend Notice.

THE GERMAN SAVINGS AND LOAN SOCIETY. The Official Sections and Done Section 1, 520 Gal run street for the half year ending time 50, 1888, a dividend has been decared at the determinant of the formation of the formation of the formation of the formation of the section and differential Paper 1, Paper 1

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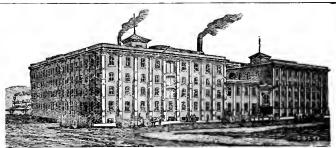
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The University of Bologua, in Italy, on June 12th celebrated its 500th anniversary. A grand festivid took place on that day and the succeeding one, but the festivities, word continued for several days longer. This university is the oldest in the world, and it its If was the direct successor of a law school which had existed for 663 years, before other departments were added to it, and the whole raised to the grade of nniversity. This was the law school established by the Emperor Theodosius II, A. D. 425. How many universities of to-day will be in existence 1,460 years hone

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A MEMOIR ON OLIVE GROWING

WITH ILLUSTRATIONS.

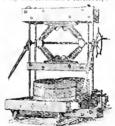
Read Before the State Horticultural Society, February 29, 1884, by

FRED. POHNDORFF.

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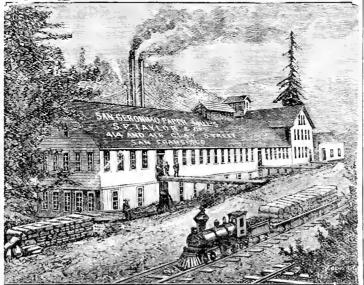


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PAPER. 1856. 1888.

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VOL. XX, NO. 8.

SAN FRANCISCO, JULY 20, 1888.

PRICE 15 CENTS

Early Viticulture in Sonoma.

BY ARPAD HARASZTHY

There is hardly to be named a plant grown on earth so cudeared to man as the grape vine. From the curliest dates of sacred and traditional history it is a constant theme of mention and so mingly comes down to us hand in hand with the progress of civilization and the advance of liberty. Its product has engaged the curnest attention of uncrent and modern statesmen, furnished unlimited study for the scientist, inspired the poet and given health, contentment and prosperity to the people of every country congenial to its growth

Following the natural b pt of civilizing influences, almost immediately after homes were constructed on the place now known as Sonoma, by General M. G. Vallejo and his followers, the virgin soil was tilled and the vine planted. This was in the early years of the decade of 1830. And as new tracts of land were conceded to the colonists they took with them and planted vines. enough to furnish their household and servants with its fuscious fruit and the production of a limited amount of family wine. The making of wine was a mere domestic contingency in those days, and we may add, continued so until the and of 1855 in Sonoma county, in which year the late Col. Agoston Haraszthy purchased the property, later called the "Buena Vista Vineyard" for the express purpose of making wine "The Register," a statistical publication, of $1859_{\rm c}$ reckening up the number of vines planted in California up to 1856, places the number in Sonoma and Mendocino counties, at 61,005 vines, making about seventy-five acres, if planted seven feet apart. At the opening of 1856, General M. G. Vallejo had about sixteen acres planted or 13,000 vines, of which 3,000 vines were from fifteen to twenty five years old. Wm. McPherson Hill had about five acres or 1,000 vines that were planted about three years. And the property just bought by Col. Haraszthy, had about the same amount planted as had Gen. Valleto. say 12,000 vines or sixteen acres. Thus there were left 10,000 vines for the balance of the valley in small lots and 20,000 for the rest of Sonoma and Mendocino, the land were ad rooted cuttings as shown by latter being at that time included in Sonema county. In all this number there were Marce, 1852, after they had been temporari | sions | This progress had been made on vis | In 1858, at the argent is pre-t of the

not a dez n varieties, and these were like strangers in a foreign land, few and for between. Mr. Hill had purchased at auction in San Francisco on arrival from Peru a few enttings, consisting of the Rose of Peru, Italia, Chasselas and Black Hamburg, the others in the valley comprised of a few Catawhas, Isabellas and Muscats, and all were planted solely for table use, the ruling grape here as well as every other part of California being the Mission graps, introduced by the Franciscan Missionary Fathers, somewhere between the years 1769 and 1770. It was thought no other grape would grow and produce well in our climate, and as the experiment had not seriously been made to prove the contrary, this belief took firm hold and it has taken two decades to demonstrate its fallacy, General Vallejo for years had caused wine to be made from his beautiful Lachryma Montis property, but, having other large interests both in the valley and other parts of the state, he gave the matter no personal attention. Small quantities of wine had also been made in a crude way by the previous owners of the Buena Vista property, but the greatest part of the grapes grown there, as well as at the other small vineyards in the valley, invariably found their way to the San Francisco mar ket, where they were eagerly purchased at very good prices. Col. Haiaszthy had tasted some of the wine made at the Bucha Vista in 1854 and this induced its purchase for the sole purpose of creating a wine vineyard. The transfer was made at the end of the above year, and beside the few varieties, heretofere, mentioned, he found some 2 000 old Mession vines that were planted in 1834, 1835, 1836, and 1837, and few of these vines were still alivand bearing about three years ago. mediately on acquiring the Buena Vista property, the new owner placed his son Atula in charge and began transferring large collection of rooted graps vine cut tings from his Crystid Springs property in San Mateo county to their new home in Sonoma, and among the first that were thus transplanted in the spring of 4856 was our present world renowned Zinfandel grape which the Colonel had imported from Hun gary, his notice band in February 1873 This importation consisted of six varieties an original memoranda made ont he 234 of

ly planted. With this lot of rooted curtings there is also mentioned 150 plans enttings, all of which were of Hungarian origin. These were permanently planted on the hillsides of Crystal Springs with other importations, but when the bearing age came, it was found that the grapes did not ripen on account of the fog, winds and extreme cold and though nearly thirty neres had been cleared and planted, in 1855 the project was recognized as a failure and abandoned. It may have been this morthan any other cause that turned Colone Haraszthy's attention to the beautiful, mild, genial, weather protected valley of Sonoma.

There he undoubtedly saw a chance of the realization of his dream, to have a winvineyard in America as he had one in his native land. There are records in his own handwriting, showing attempts made in that direction in 1845, et Sauk city on the banks of the Wisconsin river. And again on March, 4th, 4850, in the Missien valley at San Diego where he planted several neres arevines, and sent forth his orders to Europe for roots and cuttings, While on taking possession of his Sonoma property he found some half dozen varieties not reaching an acre in ext. nt, and with about sixteen against of the Massion grame, we find him reported in 1857, pages twenty-six and twenty severe. State Agricultural Society's 4th annual report as having 2 000 vines planted in 1831, 8,000 vines planted in rected 1855, Support cuttings. and the number of ange-vine varieties put down as 280. It the course of the follow ing year it was found that this iwe ber of covery then roads of many disputents This error was rectified in the Transactions of State Agricultural Society for 1858 p. p. 242, who the who is all It a varieties, and son need in the complex state, then grewing right varieties, which we 111g of the different foreign varieties be offered 30,000 cuttings, and 2,000 rooted. Surface, the

that one place in three plantings in the springs of '56, '57 and '58 and covering just two years. But the example shown, and its success did not stop there but was broadcast and wide-spread. Not content with pushing work on his own place, the Colonel sought out his own friends and induced them to become his neighbors and in a measure enthused them to the point of investing in land and planting it with vines. Thus be induced to settle around him, the late Colone I A. J. Butler, Major J.R. Synder Chas, Kiug, General C. H. Williams, Wm. Hayes, Joseph Snyder, Major Csomortacyi, John Swett, Louis Tichner, Emile Dresel, Jacob trandlach, Geo. L. Wratten and his two sons, Gaza and Attila Haraszthy. All these were thus directly influenced and plantvin yards. But the indirect influence was tar greater, numerous inquiries came from every part of the State and in those days apparently Schoma was the fount of knowlolgs in vincultural matters, and great were the numbers of those visiting the Valley, much in the spirit of the pious Mohanis med in visiting the Shiine of Mecca, secking after knowledge or gratifying an moused corresity. Numerous newspaper articles had been written on the enterprise going on in vine planting in Sonoma. and in the practical demonstration made by Colonel Haraszthy on a large for the first time in Colifornia, that the errors vine in all its varieties would not only are w without irrigation, but would trust and the trust be sweeter at 1 of fiver flavor than any pro-This forever doe do by arrigation amostron of the minute use and value of the In Isid san neathern California. The titlal ways of majority swept over the parts alloy at Saremas strains is came and went, and the Express Company and U S Mod were I denovither their, papers, paininto be we distributed to to Takes, the Back Merce 1 to cuttings for sale and 300,000 to tol Mis stodedel the Irviene is no binanscreus othral Society. Colonel Haraszthy wrote a 'lengthy article covering every detail in the setting out of a vineyard, and its practical management from the digging of the holes for setting out the vine to the gathering of the fruit. And in wine-making, from the pick ing of the grape, the crushing and fermentation down to its absolute maturity. This article was published with the proceedings of the State Agricultural Society for the year 1858, and is as valuable to day, as it was in those days of seekers after knowledge groping in the dark. A very large edition was published and exhausted, and the report spread throughout the state, made new converts to the fascinating and and promising pursuit of vine growing and wine-making. The vines in Sonoma began to spread from the edge of the springs and banks of the streams, and throwing out their yearning tendrils, clutched at the rising distance creeping eagerly up the sides of the nearest hills.

And this recalls Tommy Nau and Hamilton and Wise and Whemquartner and Csomontanyi, who perched themselves and their modest plantations on the lofty hills around, and smilingly and peacefully looked down on the beautiful valley below, contented with their work, and happy in their homes.

To 1861 a commission of three was appointed by General Downey to report upon the ways and means of improving the Culture of the Vine in our State and the making of wine. The Commission consisted of Col. Agoston Haraszthy, Col. Juan J. Warner and a Mr. Shaw. The latter went to South America and never reported. Colonel Warner made an excellent report on the conditiod of vine culture in our State. And Colonel Haraszthy visiting all the noted wine districts of Europe and making an ample report to the Legislature, brought back to Sonoma a collection of vines of every attainable variety and catalogued under nearly 500 names. There were over 200,000 cuttings and coming at the end of 1861 were in time for the spring planting of 1862. Sonoma once more revelled in the glory of renewing its importance as the vine nursery for the whole of the State, The interest in vine planting reached its highest point towards the opening of the year 1863. All those in the valley who had vineyards planted more vines and those who had none planted just to see if they would grow. And yet many were the sneers that went forth, and many the evil prodhecies by the over cautious, the unenterprising the envious and the malicious.

The new vineyards began bearing fully iu 1862, but there were no cellars, no tanks, no crushers, no presses and hardly any casks. Those who now see our magnificent appointments in this line, and who had not seen the straights the wine-maker of those days was put to, can in no possible way realize the vastness of the change. The only crusher in the valley in 1862 was that attached to an ordinary sized eider press. It was impossible to run through seven tons in twelve hours no matter the number of men exhausted in the attempt. It was in that year the first stone cellar was built in Sonoma valley and the first red wood tanks made for fermenting and storing wine. These were constructed at the Buena Vista vineyard. The tanks were each of a capacity of about 3,000 gallons and were three tunnels were dug through the soft the vines began to come into bearing more cream colored rock of the mountain and freely, which took place in 1864, the owners VIII by Pope Leo X, accompanied by the Horn.

ground. These were intended for the storage of wine, and in 1862 a large fermenting house was built in front of these tunnels, from the rock taken out. In 1863 three additional tunnels were excavated. In 1857 wine making in Sonoma was confined almost exclusively to General M. G. Valleio and Colonel Haraszthy and the amount made was very limited. The latter in that year reports having made 6,000 gallons of wine and 120 gallons of brandy and it is likely that General Vallejo made a similar amount. In both cases, however, most of the grapes were sold for table use in the San Francisco market where they brought ten cents per bound or \$200 a ton.

It would take too much space to follow the extension of the vineyards from 1856 to 1863, but to give some appreciation of the result attained in the face of every adverse contingency, want of knowledge, lack of laborers the high price of vine cuttings, a defi ciency of capital and a rate of interest that fluctuated from 21% to three per cent, per month and compounded each month, we here give the names of the pioneer vineyardists of Sonoma valley, who listened to the persuasion of the owner of the Buena Vista and lead on by his enthusiasm. To these names we add the number of acres respectively planted by each holder up to and including the spring plantations of 1863:

NAMES. ACR	
Haubert	20
Chas. Lutteen	40
Dresel & Gundlach	130
Louis Tichtur	40
Gen. C. H. S. Williams	120
John Swett	40
Attila F. Haraszthy	32
Gaza Haraszthy	25
A. P. Molitor	30
Major Rufus	15
Colonel Agoston Haraszthy	350
Major J. R. Snyder	35 15
William Shaw,	$\frac{15}{45}$
General M. G. Vallejo	45 15
Engler	10 10
Ryan	10 25
Geo. L. Wratten	25 40
Maxwell	10
Wni. Hayes	20
Green	100
Col. A. J. Butler	100
Geo, E. Wattriss	25
Fowler	10
C. V. Stuart	40
Dr. J. B. Warfield	30
Capt. Chas. Justi	8
Krohu & Williams	45
J. Whemquartner	25
II. Brockman	10
C. Weise	5
Thos, Nau	35
Wm. Hood	100
Jas. Hamilton	12
Louis Adler	60
F. Guerin	25
John Gibson	20
Col. Whitman	35
Alfred Lamotte	30
L. Csomortanyi	60
Wm. McPherson Hill	55
Gen. W. Sewell	15
$C.\ Streeter \dots \dots \dots \dots$	25
Geo. Gaes	15
Wm. O'Brien	25
O. W. Craig	65
Nick Carrigar	95
F. Sears	10
W. K. Rodgers	10
Wm. Thompson	$\frac{15}{25}$
Z. Quitzow	25 120
Others not mentioned	120
	0.000

In other words, from a beginning of 50 acres in the Valley in 1856, in eight years the amount had risen to two thousand. looked upon as monsters in size. In 1857 Two thousand and twenty-two acres! As

prominent members of the State Agricultu- one of these was thus run 130 feet under commenced the construction of their cellars, document of making Henry a detender of ordered cooperage and built presses. General Vallejo had a very good wine house in the town, in the old military Adobe Barracks; that of the Buena Vista we have already mentioned. Then followed in 1864. the cellars of Dresel & Gundlach, Louis Tichner, Krohn & Williams, Wm. Hood, C. H. S. Williams and others of less note As Sonoma Valley had so far been the school and nursery in advanced viticulture for all other parts of the State, so was it also the experimental school in practicawine making, and more thorough wine handling. It was here that the missionary work was done again, and not a county in the State that did not seek practical information at this fountain head of vitil culture and vinification. And to the credit of old Sonoma it must be said that none came that way who did not freely receive the information they sought for. The wine of each county may have had its peculiar characteristic qualities, but in those days, in point of quality as good table wine Sonoma ranked them all,

> In the upper part of Sonoma County, but very little planting went on before the year of 1861 or '62 though there were a few vines in the Santa Rosa region and at Windsor. The development of viticulture in that district to any extent was of a more recent date. Mr. Isaac De Turk's vinevard of twenty acres planted about 1859 or 18,601 and those of some smaller ones in the neighbothood which we believe began bearing to some extent in 1863 or 1864, and were considered quite prominent in that section, But it is not our intention to come further down than 1863. By that time, this noble pursuit was fairly launched on the stormy Sea of Chance, weather-beaten to sink into oblivion, or furling canvas before the gales, to finally sail triumphantly into the Harbor of Prosperity. Many of the pioncers have gone to their rest. Those that are left are struggling still, and, as the day is breaking, we trust their long treasured hopes may soon be fulfilled .- Sonoma County and Russing River Valley Illustrated.

DUNNING BY MAIL PROBIBITED.

Postmaster Bryan has been notified by the Postmaster-General of the approval by the President on June 18th of an act of Congress which provides, among other things, that "all matter, otherwise mailable by law, upon the envelope or outside cover of which, * * bibelous, scurrilous, or threatening delineations, epithets, terms or language, or reflecting language upon the character or conduct of another may be written or printed, are declared to be nonmailable matter, and shall not be conveyed in the mails nor delivered from any Post Office nor by any letter carrier." The act further provides, as a penalty for depositing such objectionable matter in a Post Office, a fine of from \$100 to \$5,000, or imprisonment at hard labor from one to ten years or both. Anything in the nature of an offensive or threatening dun apparent upon an envelope, outside cover, or postal card, or conveying the suggestion that such dun is inclosed, will be excluded as non-mailable under this act.

High Price for a Book.

"The highest price ever paid for a book," said an expert, "was \$50,000." The German government gave that sum for a vellum missal which was presented to Henry Rosa for shipment to Bremen via Cape

the faith Churles II cave it to the ances tors of the Dake of Hamilton A few years ago the duke put it into the hands of Southerly, Williamson & Hodge, of London, with other books, for sale. The German government sent a special embassy to buy it, and they carried it back in an iron safe especially constructed for it. The highest offer ever made was for a Hebrew Bible in the Vatican, for which the Jews of Venice agreed to give its weight in gold. It was a vast roll which two men could scarcely carry, and the offer amounted to \$100,000, but it was refused .- Nor York Evening Sun

A TERRIBLE SCOURGE.

A writer in a French paper estimates the total loss to France from the ravages of the phylloxera since 1875, when this scourge of the French vineyards first made its appearance, at the enormous sum of ten milliards of francs, or about \$200,000,000. This estimate is based upon French official statistics, giving the aggregate area of vinevards destroyed in the country at about 2500,000 acres; and on the assumption that, in addition to the acreage of vines thus totally destroyed, the extent of vinevards more or less infested with the phylloxera, amounts to about 500,000 acresmaking thus together 3,000,000 acres.

The Oldest Tree on Earth.

The Timber Trades' Journal is credited with a statement to this effect: The "Bo" tree, in the city of Amarapoorsa, Burmah, is the oldest on earth. It was planted 288 B. C., and is accordingly 2176 years old. Its great age is proved by historic documents, according to Sir James Emmerson Tennet, who says: "To it kings have dedicatal their dominions in testimony of belief that it is a branch of the indentical fig tree under which Budda reclined at Urumelya when he underwent his apotheosis," Its leaves are carried away by pilgrims as streamers, but it is to sacred to touch with a knife, and therefore they are gathered when they fall.

THE LATEST ISSUE of the Southern and Culifornia special edition of the Music Trade Review is to hand, and comes in a style which certainly reflects great credit on the publishers. Its columns are especially interesting to its readers on this western slope of the continent from the space devoted to local industries. San Francisco comes in for a large share of attention and familiar names of our prominent merchants and manufacturers crop up constantly in the columns.

The Masic Trade Review is the leading journal of its kind in the United States, published in New York, solely in the interests of the trade. Its circulation is extensive, which is evident from the list of advertisers, who all belong to the first rank in mercantile circles.

The kindly attention paid to the industries of this coast will undoubtedly win for this energetic and enterprising journal a host of friends here.

BEHBINGER BROS., the well-known winemakers of St. Helena, Napa County, have during the week withdrawn 250 barrels of grape brandy from special honded ware. house No. 3, at St. Helena, and 550 barrels from special bonded warehouse of Santa

Impure Olive Oil.

In his annual report to the State Board of Horticulture, B. M. Lelong, the secretary, gives the following interesting information concerning olives and olive oil in California

There is, perhaps, no branch of the fruit growing industry that is more promunent before the people than olive culture. Now plantations have been started nearly all over the State, and many others would have been started it the trees or entings could have been obtained.

The culture of the olive has become one of the regular industries of this State, and of the great future which awaits it, there is no doubt, olive oil making cannot be over done. As the production increases so will the demand, and there cannot be enough produced to supply the demand for many years to come. I am constantly receiving letters asking where pure California olive oil can be got in the East. This goes to show that the Eastern consumers of adulterated oil are beginning to robol against it, and seek for that which is pure and heal by

Professor Thos. Taylor, Microscopist U S. Department of Agriculture, writes to Mi Edward E. Goodrich of Quite olive farm under date of June 1, 1888, which I quote as follows:

"Al present I am working up tests for all food and medicinal oils and find it very difficult to procure perfectly pure samples. you will readily perceive that it is impossible for any one to define what the correct test of olive is, unless he has a pure sample by which to establish his test; for this reasin I send to you for about one ounce of your manufactured olive oil,"

This is not at all surprising, as it is well known that large quantities of seed oils and lard have been annually consumed in the United States as olive oil.

The following are those that are engaged at present in the manufacture of pure olive oil in this State: Hon Ellwood Cooper, Santa Burbara, Santa Barbara county; Frank A. Kimball, National City, San Diego county; Col. Geo. F. Hooper, Sonoma, Sonoma county; Edward E. Goodrich (Quito olive farm), San Jose, Santa Clarn county; J. R. Wolfskill, Winters, Yolo county; Juan Gallegos, Mission San Jose, Alameda County, E. W. Holmes, Riverside, San Bernardino county, Gen. John Bidwell, Chico, Butte county; D. H. H. Clark, Auburn, Placer county,

There are others who have large plantations, and many others who have in recent years embarked in the business, and have largely planted olive trees, but as yet they have made little or no olive oil, the fruit being used for packling purposes. Many new orchards have been planted in the interior valleys, these trees are young and many have begun to bear fruit this year-There is no doubt that in a few years there will be an abundance of olive oil produced in this State, and all these plantations are doing executingly well and are planted on soil well adapted to their culture.

MISSION VS, PICHOLINE,

Considerable has been said of but concerning the Picholine olive. Mr. L. Burbank of Santa Resa has been credited with having made the statement that the Picholine was the larger of the two, and manswer to a letter directed to him on the subject. sent the following.

Santa Rosa, Cal., June 14, 1888 DEAR SIR: In conversation with a re-Norter several months ago I mentioned some not good for pickles, the stone being too in certain localities the fruit grows so large

of the good qualities of the Picholine olive. Targe in proportion. But it is a sweet olive, that it must be she do in order to be prebut stated distinctly that it is much smaller, who is tipe and the stone is full of oil, and than the Mission. The article was copied I doubt not it would be found profitable for by several papers to some of which I sent a oil. The Mission faut is much burger, pernote of carrect on.

I will here state the opinion which I have formed about the two olives mentioned. Both have advantages. The Mission will perhaps grow on a dryer and poorer soil than the Pichelin olive. This statement, though not fully proven, seems probable from experiments in this and several of the southern countries. The Picholine, however, grows with great vigor on any sandy

The greatest fault with the Mission in this part of the State is the lute and uneven ripening of the fruit. Last fall a large portion of the crop was destroyed by frost. The early and even uponing of the Picholini done would be sufficient recommendation. but in addition to this it bears a regular infinal crop which is very easy to gather, is the branches droop with the weight of the fruit, which separates easily and may stripped on cloths at a slight expense

Having made no oil from either variety using all I had for pickling), I can only say that whenever the Picholine has been tested with the Mission it has in every case which has come under my notice both in California and m Europe proved to be the best for either oil or pickling.

The Mission is without doubt identical with the one called "wild olive" in parts of France where it is so shy of bearing that it is considered worthless. The Picholine makes roots much more rapidly than the Mission. Out of 800,000 enttings which we put in last winter, over 700,000 are now heavily rooted. Out of 100,000 Mission put in at the same time, not over 5,000 or 6 000 have formed roots.

Of the twelve varieties which I grow it is the slowest and most uncertain in making roots, generally producing one or two roots, on one side of the cutting while the Picholine is producing a mass of vigorous roots in every direction.

Yours respectfully LUTHER BUREAUK.

Col. Geo, F. Hooper of Sonoma furnished me with these facts, viz. In 1875 he rooted about 100 trees of the Mission variety; they commenced to bear fruit in 1879. That year he picked a few berries from them. In 1880 he set out rooted trees of the Picholine variety from W. B. West of Stockton, and the first trees to bear was last year, when about a pant of berries was picked from each tree. Trees of the Mission variety planted the same year and time that the Preholines were planted are three times the size of the Picholine, both varieties are on the same kind of land and receive the same treatment.

Mr. C. T. Hopkins of Pasadena in his reply us to the best olive, said.

PASADENA, LOS ANGELES CO., CAL. May 28, 1888

DEAL SIE Replying to your queries of the 23rd inst, 4 have to say that I have cultivated both the Mission and the Picholine obve, or what is supposed to be the Picholine being B. B. Redding's importation propagated by Wm, King of Sacramento chaving planted about 900 of the latter to 300 of the former in 1880, the trees being two years old. The orchard is now in full bearing.

The Picholms is a regular and abundant nearer, but the fruit is no larger than a eranberry, and very tedious to pick. It is

haps four times the weight of the Picheline and makes splended pickles. I have not tried it for oil.

I have found the tree disposed to bear largely when kept free from smut and scale by two washings per season, and irrigated

Notwithstanding the talk to the centrary. the olive here is as sensitive to irrigation as the orange. The Mission olive is a shy and time rtain bearer

Yours truly,

C T Hopkins

Mr. F. Closs of Auburn, in his reply, referred me to an article written by him inthe Raral Press, January, 1888, in which he says:

The comparative value of the Mission and Picholine varieties was discussed at the Santa Rosa Convention, where Mr. Butler said . " I would give the preference decidedly to the Mission. While there are not many more on the Mission, the Picheline are so much smaller it gives a decided advantage to the Mission."

My opinion about that is quite different. I never heard it proved that the Mission will have more berries than the Picheline. but know some facts to the contrary. At the place of Di Clark there are two rightyear-old trees, a Mission and a Picholine, standing only fifteen feet apart, and having had always the same care, last season the Mission yielded 19 pounds of berries, while the Picholine gave 63 pounds. This season the Mission has hardly any fruit, while the Picholine was considerable more lowled than last year.

There is another big advantage for the Picholine. Dr. Clark commenced to gather the ripe Picholines in 1887 on November 1st, the Missions he gathered just before Christmas and then they were but threefourths ripe. The late apening, I think, will interfere with the growth of next year

Lexpressed this opinion a few days ago to Judge C. A. Tuttle here. "Well," he answered, "this accounts for a fact which so far I could not explain. I have on my place two Mission olives, one of which had a fair crop last year, while the other had only a few. This year it is just reversed The poor one of last year has a good crop, while the other one has hardly any berries."

The Judge packs his olives when they are dead ripe that is, in I's bruary and is fond of eating them then as they are, because they have lost all lutterness.

Probably climatic conditions may account for the productiveness of this variety in some sections more than in others, and I would be thankful if those who note the conditions would birmshine with necessary

I peopled a bottle of pure Indian oil from the efficient scenerary of the Italian Chamber of Commerce, Mr. Dodero, with the following meter

The objections which this oil is made produces from 15 to 45 per cent of good oil. while the kinds of olives so far planted in California does not, to my knowledge, produes 10 or 12 per cent. It seems to me, therefore, that the introduction of such stock would be a vivy polerous addition to the wealth of this State

There is also in Italy an olive for pick ling of north larger size than the Sparish of very small kernel and or much finer flavor. Imagine the size when I say that

served. I hope to have a sample before long to present to you.

There is no doubt in my mind but that the varieties mentioned by Mr. Dodero could prove a valuable acquisition, and those who can, ought to experiment in that

Mr. L. P. Rixford of Sonoma has an divi of a distinct variety growing at this place, which was imported from France some ten years ago. Mr. Rixford reports this variety as ripening much ahead of the Mission, the first is a little smaller than the Mission, and three times larger than the Picholine. The tree is a rapid grower and the frees are equally as large, as the Mission trees of the same age. The oil made from this olive of which there is a sample in this office is very rich and sweet.

The original lab I was lost, therefore it is not known what its true name is, but Prof. Gastay Eason believes it to be the Pendellier, I shall try and obtain further facts concerning this variety, which will appear in subsequent reports.

The fact that the Picholine has advantages over the Mi-sion is not yet fully proven. The Mission has done well in this State and has produced an oil that in my opinion cannot be excelled, and which has begun to attract the taste of the Eastern consumers. The berries are large, being five times the size of the Picholine. I have a bottle of pure Picholine olive oil alongsub- of the Mission, and I doubt very much if any one could tell the difference, if at all, the points are in favor of the Mission. One of the great stadyantages the Mission has is that it is a rapid growin, commences to bear young and is a free stone, which renders it most valuable for pickling purposes. N w varieties acquire considerable time to be jested, and when the fact has been clearly demonstrated that better and more productive varieties are tenting in this State, then it is an easy matter to bud or graft the trees, having a thrifty and healthy stock to start with.

SECRIOUS OLIVE OIL.

My attention has been called to several brands of oil in the Sin Francisco market, Libeled "Pure California Olive Oil," Only one bound was reported to me, but on investigation of those offered for sale as pure California oil, I discovered five brands of of purporting to have been made pure from the native dive for the express use of the parties whose names are on the labels Three of these braines are tabeled as having been put up at Sierre Melie, Sinta Maria and from a San Bernardino olive grove

Assembly Made there are but few olive the splanted and but few as yet bearing any finit and what dives are produced there has been pickled.

At Sont. Many there are but few physis excepting the new achirds that in the last five veas have been planted.

In San Barnardine county leit one person his ever made on slive oil, and he only a shrill coount Mr I W Holmes of Biverside. There are many trees planted in that enunty, but the fruit is used for pickling, so you will see that it would be impossible for those brands to have been produced at Siella Madra, Santa Mulic of in Son Bera colling county.

As perhaps few are notice. If the frond prictical I would recommend that a commatter be appointed to examine these various brands and to tile a report before the Telescool this meeting

In order to ascertain the percentage of human body should rebel against such oils. oil (if any) in these various brands. I made the following tests with each one. The samples were purchas d, and are what is offered for sale as pure California olive oil:

Sample labeled pure California olive oil from the Sau Bernardino olive grove .-Mixed 9 parts of the oil and one part nitric acid. Boiled the two together in a whiteporcelain dish. As soon as the action of the acid and the oil was fairly set up, it was removed and allowed to cool. This sample assumed a deep orange-red color in the dish while heating, and on cooling remained liquid. The sample showed the presence of lard and seed oil, and no trace of olive oil whatever. The next sample treated was one called Santa Maria Pure California Olive Uil. The method of testing was the same as the former. This sample on cooling showed the presence of ten per cent of olive oil, the remainder seed oils and

Coburn's California Pure Olive Oil-This sample showed the presence of more olive oil than the others, registering 30 per cent olive oil, 35 per cent lard.

Red Cross Brand California Pure Olive Oil-This brand bears a certificate of pureuess, from Prof. E. W. Hilgard of the State University, Berkeley. The bottle procured I forwarded to him with the request that it be tested, and to inform me of the result. 9th day of September, 1850.

The next week 1 received the following from him:

BERKELEY, June 30, 1888. B. M. Lelong, Secretary

State Board of Horticulture.

DEAR SIR:-We have made thorough tests of the oil contained in the bottle procared by you, labeled "Pure California Olive Oil, Red Cross Brand," which hears on one side a label with a certificate of purity sigued by me, and which was given upon the result of the examination of a sample sent by that firm some time ago.

The oil in the bottle now sent by you is grossly adulterated with another oil, probably cotton-seed. I had not the time to verify more exactly the nature of the adulteraut, and certainly contain less than half its bulk of olive oil. It is needless to say that the use of my name in the manner shown on the bottles is wholly unauthorized by me, and was not mentioned in any way at the time of the examination of the first sample. The use of the certificate on adulterated oil is an act difficult to characterize in courteous lauguage. I have notified the firm to discontinue at ouce, and definitely the use of this label, and trust they will do so without any need of atronger measures.

Very respectfully yours,

E. W. HILGARU.

Sierre Madre California Pure Olive Oil-This brand showed the presence of ten per cent of olive oil, balance, I believe, to be lard oil.

I have not had time to fully ascertain the various adulterants all these brands contain and also the exact percentage of olive oil, as when old olive oil has been used, as in this case, it partly unites with the adulterant.

In a treatise ou olive culture, Hon. Ellwood Cooper says: "This unwholesome adulteration can create the most serious disorders on the digestive organs, and should be carefully avoided by persons who have any regard for their health. Mechanics refuse seed oils because of their dryness, as they gum up the machinery instead of greasing it and keeping it clean. It is just Fresh fruit shipped East in 1887, 35,as important that the machinery of the 342,000.

We ought to be familiar with the methods of extracting oils from all oleaginous substances, being so necessary to different industries, but all the table oil should give the preference to that made from a tree that the Almighty saved from the destruction of the deluge and a branch of which the dove carried to Noah as a sign of for-

CALIFORNIA

Her Products and Natural Advantages.

A special correspondent of The South, published in New York, is now in California, gathering facts for that paper. late issue contains the following so unlike what usualy emanates from Eastern journals as to induce us to reprint it:

California, from Oregon on the north to Mexico or Lower California on the south. has a length from northwest to southeast of 770 miles; and from Nevada and Arizona ou the east to the Pacific Ocean on the west, an average width of 330 miles, making a total area of 158,360 square miles; hence it is the second largest State in the

It was acquired by conquest, and later by purchase from Mexico in 1847, and was admitted into the Union as a State on the

In 1880 it had a population of 864,694, and at the present time its population will exceed 1,500,000, almost double what it was in 1880

In 1880 California ranked first among the States in per capita wealth, ninth in aggregate wealth, twenty-fourth in population, twelfth in maunfacturing importance, and fifteenth in agricultural products. The assessed value of all property in 1880 was \$584,575,036; in 1887, \$900,395,713 Increase over the year 1886, \$132,000,000. The deposits in commercial and savings banks in 1887 amounted to \$146,611,433 Iu savings banks alone, \$70,077,893. The net debt of the State is \$351,500. There are published in the State 427 newspapers.

In 1885 there were 2,262 public school buildings, with a vast increase since that time. There were at that time 3.028 teachers, with school expenditure than year of \$3,920.227. Salaries paid to teachers. \$2,573,623. Value of school property. \$7,935,620.

The gold and silver product for 1887 was \$20,000,000. Total gold and silver produst since 1884, \$763,989,650.

The orange crop for the season of 1887-8 was upwards of 1,250,000 boxes, and the hop product 4,500,000 pounds. The aunual average of the wool product for ten years is 43,500,000 peunds.

During the last eight years the wheat shipments have amounted 15,000,000 centals, and the flour shipments to 9,600,000 barrels. The annual average of the barley crop in the last three years has been 20,000,000 bushels. Quicksitver product has been 45,000 flasks per year for the last eight pears. Grape brandy in '87-800,000 gallous. Wine product, annual average for five years, 16,000,000 gallons. Raisin product for 1887, 1,000,000 boxes. Bean product in 1887, 60,000,000 pounds. Vegetables shipped East in 1887, 40,000,000 pounds. Canued goods, 50,000,000 pounds. Nut crop for 1888, 2,250,600 pounds. Dried fruit shipments, 16,00,000 pounds.

These figures are taken from the most reliable source, and show in a measure the vast growth and prosperity of this wonderful State. One can hardly write of the resources and advantages of California and truthfully tell of her glorious climate and prolific soil; her vast accumulation of wealth and commercial importance; her geographieal peculiarities and boundless products: her natural wonders and sublime scenery, without exaggeration and misrepresenta-

California is a wonderful country, and its possibilities are not yet found out. It combin s the elements of the temperate zone and those of the more tropical climes, so that the settler can quickly build up and beautify a most desirable home. One meets the energetic element of the Northern States in a climate capable of producing not only the products of the North, but the luxuries of the Southern climes. The good of both and all parts of America here combine to make one grand whole.

The Eastern people are becoming aware of this fact, and hundreds and thousands are flocking here seeking homes. It is estimated that the largest part of those coming to California during the last winter came to locate. Towns are springing up all over the State, and beautiful homes, surrounded with the comforts and luxuries of life, tell of the happiness within. Of these towns we shall have more to say later on, as we visit them in turn to ascertain more fully the facts and figures of their growth and prosperity.

MEDITTERRANEAN FRANCE.

The climate of this portion of France bears a strong resemblance to that of the Coast counties of California, the summer temperature rarely exceeding 85 degrees Fahrenheit, whilst suow and ice are as infrequent in winter. Drouths are common during the summer months, sometimes accompanied by harsh dry winds from the northwest. Irrigation would be general but for the scarcity of water, most of the streams running dry during the summer. Wherever employed, irrigation is more sparingly used than has been the custom in the irrigated districts of California, and often takes the form of hand sprinkling about such plauts as require it, according to the wants of each individual plant er viue. The characteristic study and management of detail which mark the French people in all their undertakings, as coutrasted with the free and easy, happy go lucky way of the average Californian, is conspicuous in this as in all things pertaining to cultivation. Instead of turning on a flood to equally drench all the trees or vines in an orchard or vineyard, the necessities of each plant are carefully studied and water applied accordingly, so that drowned plauts are as rarely seen as the water-starved. An old French proverb says that "a year of drouth is a year of good vine," and the improved quality is generally made to compensate in price for the diminished yield. Fertilizing is brought to a science. In new soils the vines usually run for thirty years or more without requiring help from fertilizers. In some cases the old soil is carefully removed from the foot of the tree, and for a distance along the main roots and replaced with with virgiu earth, sometimes mixed with marl. Stable manure, the borns of animals and oil cake are employed as manures, and always buried in furrows between the vines. apart both ways, but no intervening crop. Formerly where the space between vines was greater, grain was raised in the intervals, but this custom has about disappeared, it being hurtful to both the vine and grain yields. The wine product per acre ranging from 50 to 400 gallons is calculated to make our California growers laugh, when compared with their own immense yield. The wine crop is the principal dependence of the farmers, to whom the appearance of the phylloxera some fourteen years ago threatened universal ruin. After trial of many other expedients to save their vineyards, resort is finally being generally had to the planting of American resistant vines. targely the Riparias. Next to grapes, olives are the most important of the crops, the groves being chiefly confined to the immeduate seashore region, and none far removed from the sea. They thrive in any soil, the poorest or the richest, only requiring easterly or southerly exposures or shelters from high winds. The simplest cultivation prevails, and many groves which are not cultivated at ail, produce the highest grades of oil, though in reduced quantities. But little pruning is done beyond suckering and removing withered or entangled branches, Irrigation and manuring are also employed sparingly as in the case of the vines. Great devastation is worked in some years by the Dacus, a small fly which punctures the olive at forming time and deposits an egg, the larva from which feeds upon the pulp of the fruit, and when emerging into the air often cuts the stem, causing the fruit to wither or fall.

THE OLIVE TREE.

The olive tree belongs to the jasmiue family, with evergreeu foliage and blossoms in clusters. It can be propagated in many ways, but the best way is by planting the seeds. This method is rarely followed in this country, however, as it grows readily from the cuttings, like the willow, and will bear in eight or ten years. From this time forward, the yield increases with the growth of the tree, which in favorable soils grow to immense size. There are many olive trees standing in European countries to-day, which are over a thousand years old, and still bear fruit. In France, the yield per acre is calculated at about 1.250 gallous. Judging from the crops picked from the young trees in California, it is fair to assume that owing to a more even climate and superiority of soil, the yield will be much greater here than in France, when our trees have reached maturity

The Eastern Grape Crop.

In New York State the grape crop gives promise of being unusually large. Every year the vineyards are receiving better attention from the growers, and what has for years been known as the Hudson River peach district, is fast giving way to the cultivation of grapes. Growers say there is much more money in them, and they require as a whole, less attention. During the coming season, hundreds of acres will come in bearing for the first time. In Orange, Delaware, Dutchess, Greene, Columbia, Albauy and Ulster Counties, it is safe to predict that the crop will exceed that of last season fully thirty per cent. The aggregate yield along the valley of the Hudson will be from 8,000 to 10,000 tons heavier than last season. The principal variety is the Concord, and next fall it will not be surprising if they are sold at from Viues are usually planted from 31/2 to 5 feet two to three cents a pound by the growers.

CEPERTINO

A Celebrated Wine Grawing district of Sapta Clara County.

Cupertine, says a correspondent of the San Jose Heraid, is a place of no little iniportance, with a future before it as well assured as any place in the band. It is here are to be found the sphendally appointed chain of wine cellars of John T. Dayle the eminent jurist and champion of Califorma's wine-growing industry, while all about and close neighboring are some of the finest vineyards and orchards in the State.

The newcomer in San Jose soon becomes cognizant of its relative position in the general topography of the Santa Clara valley. Nestling not many miles from the foot of the imposing heights of the Ceast Range, which marks out the custern line of the valley, the Garden city sends forth in the perfection of symmetry her streets lined with an infinity of shade trees, with gardens on every side. To the west the valley unfolds itself with its acres of fruit trees and vineyards.

To the north is the southern extremity of the bay of San Francisco in its perpetual calm that almost compels the doubt that this is an arm of the ocean. Away in the western prospect, after the eye has accomplished 12 miles of valley that hes in the foreground, the grand old range of the Santa Cruz mountains comes up to mark the western comfines of the valley. These mountains are always certain to command particular attention from their general striking appearance, whose enumences, robed in the despest blue, stand forth in graceful ontline against the western sky, a pleasant contrast to the green of the orchards and vineyards that now almost altogether occupy the whole of this promising region.

In the foothills of this range, almost directly west of Sau Jose, as Stevens creek, known as a favorite driveway and well patronized in the season by devoters of the trout-fishing sport. On the east side of this creek, at or near where the creek enters the valley from the mountains, is Cure-rune, and closely neighboring is the celebrated Gleubrook or Blackberry Farm, a pleasure resort well known in San Jose and generally over the State. To Mr. Doyle, Capertino owes her existence, and everything pertaining to her present importance comes from his hand, for he has spared neither time nor money to promote the interests of the place. He has estab blished the postoffice of Capartino, and built numerous cottages for his workmen, which comprise for the most part the little town, and the wine cellurs, constructed at a heavy outlay, are a study for the perfection attained in the details pertaining to the making, handling or shipping of wine

As an example of the high approximin in which Mr. Doyle's improvements are held it is a well authenticated fact that he is in receipt of a standing offer of \$225,000 for his property on the cast side of the Stevens Creck and Mountain View county road, which includes his vineyards, old and new, and his wine collars. He has 200 acres in his vineyards and a small proneorchard of ten acres in the led of the creek, so that including his wine collars, he can sell out to-morrow for \$1,000 an-

sons. Mr. Williams was the first to plant means yet. The immigration of monof the fruit will be one

grapes in Cupertino some eighteen years. age, and in those days it was looked on only as an experiment by the neighbors, but Mr. Williams had come directly from the northern countres, then about the only wine growing section of California, where he had already had considerable experience He was sufficiently confident to go alread, and he has since been abundantly rewarded. Mr. Williams is the owner and constructor of the immense Union Winery at the pinetion of the Stevens Creek and Stilling roads largest wmc cellar in the valley

Another vinevardist who deserves no less credit for the handsome showing mad by his improvements is Richard Henry, Jr. late of the well known furniture firm of Wm, T. Henry of San Prancisco, and as a city man of business he has managed admirably, and the barren hill-sid's have been transformed into a perfect Eden of spreading vines and luxurant fruit trees Mr. Henry talks of putting down a pape from his wine cellar to the bay, through which he will ship his wine into schooners on the bay. He claims a fall of 300 feet in the grade, and he claims this is sufficient for the purpose, although his pipe must need be some eight miles long, following th torthous line of the cresk bid

Another vineyardist who has kept pace with the march of improvements is Mr. Lawrence Sellinger of San Francisco. The ranch of Mr. Sellinger was, even in its primitive state, one of the prettiest places in the valley; and his improvements have added greatly to the beauty of the place. The vineyard of Mr. Sellinger is nevertheless one of the finest about, and his prune orchard is a marvel in its growth for its age, Mr. Sellinger has built a splendid wine cellar with concrete foundation.

Another of the large vineyards of Cuper tino is that of Mr. Nathan Hall, of sixty acres, which, situated in the midst of the choicest part of the Warm Belt, appears at no disadvantage when compared with sur rounding vineyards, Mr. Hall has yet no wine cellar, disposing of his grapes to buyers, as is generally the cust on of the lesser vineyards hereabouts,

Among the smaner streyards may b mentioned those of Frank Anthony, Joseph Spedding, the Cupertino Vincyard of Mr. Harrison and Charles Smith. Foremost among the orchardists of Cupertino is Joseph McClellan, whose orchard and nursery present a powerful argument in favor of the horticultural possibilities of thus district. Mr. McClellan's trees are just coming into full bearing, and it is not improbable that this orchard may yet be heard from in connection with its remarkable yield.

Cuportino, during most of the year, and specially in the wine-making and graps picking season, has quite a population. These are mostly Italians, but there is a sprinkling of other nationalities also, Mr. Ab xander. Phillippi is the foreman and general Joisiness manager. At Conserting too, lives our widely known Roadmaster Jas. McComb, to whose good management we are indebted for the time condition of our roads. Altogether, the Cuperimo district is universally conceded to be one of the finest portions of the Santa Clara valvery possibly for fruit-growing, where quality and not quantity is sought for. Within

means to California scens not to diminish, lower grads will be used in the manufacranges, valleys and plains, that might inest known to the market, raise up a score of New Englands. The band of the setting sur. The western rangerts of our Foderal Union

There is some talk of another rise this cutuum, and purchasers, or these intending to purchase, should take warning in time It is a ported that as high as \$15 a ton ibeing already offered for Cupertino grap so

THE OLIVE IN CALIFORNIA

A not, in the Alameda Jounty Bems of the Alla, recently says, that three-year-old olive trees, transplanted two years ago into the orchard of Robert McGlashen, Livermore Valley, are this season bearing olives. In Europe the minimum bearing age of the olive is seven years, and in some of the Mediterranean olive regions the tree is barren until ten and fifteen years old. In such circumstances the times of waiting for a crop is teo large a section out of a man's life, and the planter of a new orchard is working for prosperity indeed, since others must enjoy the fruit of the tree whose bloom he is not to so. In California the olive partiales of the progreative proceedy which inheres in our climate and physical conditions. But as far as vegetable life is concerned, this precocity is associated with longevity. The peach in this State will bloom within the year that it germinates in the stone, but the tree is practically immortal. We know peach erchards here that are thirty years old, and the trees bear annually with vigor and excellence undiminished. The rich earth and elements of the air stimulated by sunshine so in to furnish a store of mexhaustible material for the support of plant and tree life. Therefore, while the olive is precocious there is no reason to doubt that it will reach the age of those trees in Palestine which have a record of twenty conturies.

The clive growing area of California is vast. The slopes of the coast range and footbills of the Sierras, as well as the minor valleys, all seem kindly to it. From San Francisco we look over the bay upon the semi-circle of mountains which wall in Oakland. Their sides are bare except for occasional groves of cucalyptus and bay trees. But upon those mountains Joaquin Miller has planted the proper olive orchard of nearly two thousand trees. They have met yet been in the ground a year, nor half a year, but they have blossomed and fruit is upon them. It would greatly interest an olive grower to visit Mr. Miller's trees on that buld mountain side and see the sprightly, thrittly growth they have made. They seem to fortell the time when the summats which over hang the leav will be crowded with ohio greyes, and the pictursque mountains wil receive to we beauties, wolded to a utility new unknown.

The use of olive oil in this country is xtending. Probably two million dollar's worth is consumed by our people. The fortunately adulteration of the article keeps pace with the increased consumption and wines grown in this district, but are not so tends to raise the pure article by limiting by, certainly for climate and scenery, and its side. When California rules for eyes open to all her opportunities, every spot on the mountains that will hold an olive tree the past ten years, old residents have soon where it can get its frequent breath of sea Another well known vineyard adjuning land go up from \$ 65 an nere to \$200 and air, will be occupied, and the product will Cupertino is that of S. R. Williams, and \$250 an acre and the end is not by any boused not only as a part. If the short but part that its in

but at the high rates for traveling, it is ture of soaps to rival those of Castile, only men of means that may come thus far. Marseilles and Venine. The California or-California is the Ultima Thule. Far away chards are now used sodely to produce she has past chain after chain of mountain chibbs oils, and the pure branels are the

> This industry owes its impulse here to the efforts of Mr. Edward Cooper, the success of whose experiments at Santa Barbara have wonderfully stimulated interest in the whole subject. We believe there are several millions of trees now growing in this State, and their product will soon begin to figure appreciably in the statistics of our rural resources. When our farmers and orchardists understand the subject, rural homes all over the State will have their olive groves and oil will be made for domestic use as easily as butter is made faceW.

> Surely it is a wonderful State and beautiful in which the waste places are still so favored by nature that the alive tree roots in them and gathers its sweet oil and flourishes.

AN EXPENSIVE GRAPE GROWER.

The largest grape-grower in Northern Chautanqua lives at Westfield, Mr. John Faral is well known to the majority of our paders, being a equitalist with very many interests all along this lake shore section. His vineyards are located mostly in the towns of Westfield and Pomfret and aggregate over 190 acres, seventy-five of which were set out last spring. On each 30 acres he builds a packing house and barn and places so much under the care of a competent vineyardist. In this way he is able to give proper care and attention to his entire crop, no matter how large, and from what we have seen, there are no better cultivated vineyards in Northern Chantanqua than his. In thus enlarging his grape interests, he has selected the very best land and intends to spare neither pains nor expense to keep the quality of his fruit up to he highest possible standard. In case of over production, which he does not anticipate, at least yet awhile, he will build cold storage houses, and if necessary, wine cellars. At any rate he intends to push his interests in this line all he can. Mr. Faral is a thorough business man and with his large capital, he will undoubtedly retain the lead he now has among local grape growers. We understand he intends setting out another 75 acres next year

BURGUNDY WINE

In answer to a correspondent, the Farmer says - "Burgandy wine is generally used to denote a class of dry, still, nel wines, heavier than claret. It's a general name for a class of wines, not that of a single kind. They are chiefly the produce of vineyards on the hilly lands between Dipon and Chalons, France, many of them boung 1,000 feet in height. In richness of diver and bouquet these wines are among the best. Among the most famous brands of Burgansly are Closvouge of Nuits, Chainbertin, Roman-Conti, Rich bourg, Volnav and Pomard. There are also fine, white well known. All art 75,000,000 gallons of wine are unmully produced in the Bur gundy district.

California to-day grows all the Burgandy gripes, and produces the exact counterpart of Burguisly wines. They are just as good in the first of proposed of north loss

VINTAGE AND ADVICATION

The best grapes of finest growths, when treated according to Petiot's process, vield the greatest advantages: for that which remains best to the very end of the operation is the bouquet-the particular flavor which distinguishes each situation and each product, and which gives in its value. Many persons have tasted these wines, have lound them good, and have not been able to distinguish them from the wines pressed from the grapes directly, and yet they cost but one-third of the price of the latter. Such are the data which Petiot published in a letter addressed to the Central Society of Agriculture

This method was introduced into Germany by Thilmany, General Sceretary of the Agricultural Society of Rhenish Prussia. who made experiments with the process, in order to be able to determine its value by personal experienc.. In the year 1858 he related his experience before a meeting at Bonn. A report of this lecture is given in the Eonner Zeibing of March 5, 1858. His lecture bore the title, 'On the French art of making, from a given quantity of grapes, four times the quantity of wine which those grapes would yield by the ordinary method," He exhibited a great number of samples of wine made by this method. The circumstance that Thenard had then also used this new method, and had employed in his experiment thirty-six thousand kilogrammes, of a value of elevan thousand thaters, of sugar-a sum of money which such a man would not easily risk. unless he felt sure of the success of his process-came greatly in aid of the lecturer.

Dr. L. Gall of Treves, who had already taken up this matter some years before Petiot, now published in the year 1862 a little pamphlet entitled "Petrot's Method of increasing the Quantity of Wine, (Treves). He gave in that pamphlet a series of tables by which every producer might at a glance, ascertain the quantity of water and sugar which he would have to add to the murk of the grapes in lieu of thenatural must withdrawn. He then adduced in support of the process the teachings of the French chemist Manmene of Rheims, and of Ladrey of Donay in Burgundy, Maumene's "Sur le Travail des Vins' gives an historical account of experiments which were made in the year 1777 by the celebrated chemist Macquer. who from quite unripe and hard grapes, made an agreeable tasting, fiery wine, like that from ripe grapes. He says that the experiments of Macquer have changed a thousand times, and have been employed by thousands of people, without ever having been studied with scientific precision by any one until Petiot placed the matter clearly before the public. What must surprise every one is that each one of these chemists and experimenters admits that the sugar-infusion wines retain the perfect bouquet of the initural ones. The amount of acidity or of tartrate of potash in them is less than in the natural wines. The circumstance that they contain so little tartrate makes them much more like old wines, for it is well known that wines by age deposite their tartar and become milder to the taste. The infusion wines resemble natural wines in all essential qualities; they contain all the essential ingredients. and almost in the same proportions, as the natural product. The non-essential ingrethe infused wines to such an extent that not be prudent to propose, and impossible rule: The quantity per thousand of acid to-day.

their absorption of favorable sirones tange The method promises to increase the quantity of cheap beverage, and affords to the less opulent classes the means of making for themselves a cheap, wholesome beverage, even from grapes from which wines could not be obtained fit for commerce or

SPECIAL APPARATES AND BULES REQUIRED FOR THE PRODUCTION OF SPRAN-SOLUTION 11.15.65

1. Balance with weights 2 Measuring vessels 3. Vats admitting of the measurement of large quantities of fluid. 4. A hatchet for chopping the lumps of sugar. 5. A large copper kettle for producing sucar-solutions, 6. Froth spoons and according to Celsius, S. A specific gravimeter 9 A fernantation learn I with a pierced double bottom for drawing the wine from the mark.

The snear most always be more white cane-sugar, for grape-sugar so called, or sugar made by the influence of sulphuric acid upon starch, is always objectionable Cane-snear is always chemically pure. while grape-sugar is frequently moist and impure, though white. For every sum of snear wine, which is count to 160 hottless from 30 to 50 lbs, of sugar are required.

The white grapes to be used should be left on the vine as long as possible, for it is known that their quality becomes the better the longer they are allowed to hang; the quantity of sugar contained in them increases, while the amount of acid diminishes. The black grapes, on the contrary, should not be allowed to get over-ripe, for the wines obtained from over-ripe black grapes mature very quickly, and indeed. are passed in the third year; while the red wines obtained from grapes at the proper stage of ripeness have their greatest value from the second to the fourth year, or as long as they possess the qualities of youth.

The grapes may be pressed, and the must treated with the sugar-solution; or the grapes may be crushed and fermented together with their juice, and the first wine drawn off after they have fully fermented. and the sugar-solution thrown upon the murk. All this depends upon the nature of the grapes, and the amount and quality of the wine which the producer wants to obtain. In any case he adds to the murk always a quantity of sugar-solution, which is the same as the amount of the must withdrawn, and contains the same amount of sugar. This process allows of any person obtaining a large quantity of wine without sacrificing a single drop of his natural wine; for he, of course, obtains the natural wine in the first instance, and can deal with it as he pleases,

ADJUSTMENT OF ACIDITY AND SUGAR WHICH OUGHT TO BE MADE IN MUST BEFORE IT IS ALLOWED TO FERMENT.

A wine which contains less than 6 per cent, of alcohol tastes tlat, and a wine with more than 10 per thousand of acid is so sour that one cannot drink it. Now, if we obtain in a bad year, a must which contains only 12 to 14 per cent. of sugar, and from 15 to 18 per thousand of acid, we are obliged to throw away the wine which would be obtained from such a must, for nobody could drink it; it has, indeed, been demanded by many persons that such produce should be thrown away. But without entering into the discussions which have

to enforce, such a measure. Various processes have been devised to improve such a wine. The first process was invented by Chaptal: he merely added the snear which was wanted, and thereby gave it more strength, but he did not by any means diminish the acid; and that diminution of acid was in France and other parts generally effected by the adlition of chalk or plaster of Paris contaming chalk. It was Dr. Gall, whom we have already quoted in a former pringraph, who first proposed to dilute acid must with a sufficient quantity of water, in order to reduce the proportion of its agid to that of the least natural most and then to add sugar in order to bring up its sweetness to that of the best natural hadles. 7. A thermometer centi-graduated must. Gall determined the amount of acid in the must by chemical analysis, and then depressed its quantity to an average of 5 per thousand. The addition of sugar was made sufficiently great to be equal to 20 per cent, of the diluted must. To express the proceeding of Gall shortly, be made in all cases a normal must of 20 pe cent, of sugar and 5 per thousand of acre. Of course the quantity of wine thus produced was the greater, the greater had been the acidity in the must employed; but what struck the observer as most remarkable wa this circumstance, that the wine was alway better than the wine from the same some must made by ordinary means. Indeed. anybody who will consult old cookery books will find therein numbers of prescriptions for making gooseherry, current, and als sorts of fruit wines, and he will find in all of them that water is added to the fruitjuices, and then their sweetness brought up to a certain point before they are allowed to ferment. The process of Gall was therefore only an extension to wine must of a practice which for a very great length of time had been commonly applied to ordinary fruit-wine. We have ourselves made several descriptions of fruit-wine according to this process, in the following manner.

DESCRIPTION OF THE PROCEEDINGS FOR MAN-ING FRUIT OR GRAPE WINES, ACCORDING TO THE METHOD OF GALL.

The fruit is well crushed and the juice pressed out. A small quantity of that juice is then analysed as to its acidity. A standard solution containing 5 parts of tartaric acid in one litre of solution is made: a saturated solution of lung in water made, on the other hand; and it is ascertained by the usual method of volumetric analysis how many cubic centimetres of the lime-water are necesary to neutralize a given quantity-say ten cubic centimetres -of the tortoric soid solution. By this means it is found that a certain number of cubic centimetres of the lime solution correspond to a certain quantity of tartaric acid; or, if applied to any liquid containing an unknown amount of acid, they will express the quantity of acid-contained in that liquid as tartaric acid. Now, when we took a natural fruit-juice, and found say 10 per thousand of acid, we were obliged to add to every five measures of the juice five measures of water, whereupon the acidity would be depressed to half its original degree, or 5 per thousand. When we found 12 per thousand, and were desirous to reduce the quantity of acid to 7 per thousand-which we always did in cases where we supposed the acid present to consist more of citric and malic than of tartaric acid-we added to every sever measwhich it is desired to obtain is deducted from the quantity per thousand actually found by analysis; the remainder gives the number of measures of water which it is necessary to add to the measures of noist extensed by the district quantity of acid per thousand. By this dilution the quantity of sugar is naturally very much depressedbut as this depression is known, it can be easily remedied. The specific gravity of the must, according to the tables, gives the quantity of sugar which is actually contained in the mixture. Suppose the sugar originally contained in a fluid so diluted had been 15 per cent., and the quantity of fluid had been raised from 5 to 10 measures. then the percentage of sugar after the dilution 15 x 5 10 = 71, per cent. In the second case, where, as above mentioned, we have diluted from 7 to 12 measures, the equation would be 15 x 7 t, = 83, per cent

Now if it is desired to bring up the must to the normal strength, 20 per cent, of sugar, then, in the first case, there would have to be added 20 less 71%, or 121% per cut, of sugar; and in the second case, 20 less 814, or 1112 per cent, of sugar.

One per cent, of 100 litres must be equal o I kilogramme: 100 litres of dilute must require therefore 12% and 11% kilogrammes of sugar. The wines obtained from these mixtures contain 5 per thousand of acid. and between 10 and 11 per cent, of alcohol (To be continued.)

THE VALUE OF GRAPES,

In all the long lists of fruits, there is none so valuable as an article of food as the grape. Year after year, the consumption of grapes increases, and we have no doubt that it will continue to increase quite as rapidly as the supply. The grape is peculiarly useful as food. It should be made a prominent article on the bill of fare not eaten simply as a desert, or between meals as a tid-bit or luxury. For persons of a bilious diathesis, they are invaluable Let such persons begin with the first grapes that ripen and eat moderately of them at each meal. Increase the quantity gradually antil they manage to make grapes the principal article of food; for two meals out of three, eat nothing but bread and grapes. The improvement in their health will be rapid and of a permanent character. In Europe they have justitutions for invalids known as "grape cures" where the patients are fed an increasing proportion of grapes until they eat nothing else.

There is nothing to hinder almost any family from eating freely of grapes in these days, as they are sold at prices which make them as cheap as almost any other food. Four pounds of grapes can be bought for the money it requires to buy one pound of peefsteak and it needs no scientist to show that the grapes are worth the most as an article of food. As people find these things ont, they will eat more grapes, and in this fact we find encouragement for an almost unlimited extension of our vineyards. Port Jervis consumed last season probably not less than twenty tons of grapes, while ten years ago one ton would have supplied the demand. Doubtless a similar growth is taking place all over the country, especially where grapes can be had at moderate prices.

The many arrangements for keeping grapes, now in vogue, have successfully prolonged the season until late in January, and this has largely added to their con-

A SACRAMENTO WINERY.

One of the lending industries in California, says the Sacramento Workly Union as the growing of grapes and the manufacture of wine. In nearly every portion of the State, these two go together, and whire you find an extensive vineyard, there you also find immense cellars. In this county, are some mammoth vineyards, that of the Natonia Company alone containing mevards of 2 500 agres of bearing vines. Until last season the grapes of this mannense vine yard were sold to outside parties, hundreds of earloads of table grapes going to the Eastern market, while the remainder of the erop was shipped to local winers a and distilleries, where it was made into wine and brandy. In March, 1880, Mr. S. Nevis built the Eagle Winery, on the south half of the block bound d by O and P. Eight. eenth and Nineteenth streets. The moun structure, which is a two-story barck with a basement, faces on Eighteenth street, and in size is 66x120 feet. It is a fine structure. covered with a corrugat duron roof and fitted up quite expensively. South of the main building is his shorry room, with brick floors, comented coiling and walls, and fitted up with steam pipes throughout Those who have visited the premises say it is one of the most complete and convenient wineries on the coast, and to make it so the promieter has not taken into consideration time nor expense. Mr. Nevis makes over twenty different kinds of wines, and so fur has found a good market both at the East and in San Francisco. H. owns no vincyard, but bays all the wine grapes raised in this vicinity, and in some parts of Yolo and El Dorado counties, with the exception of what is bought by the winery near Gatheic's station. He says, since starting up this winery, he has made the following amounts annually. In 1880, 35,000 gallons, 1881, 60,000; 1882, 60,000; 1883, 100,000; 1884, 75,000; 1885, 100,000, 1886, 250,000, 1887 159,000. Last year the grap crop was not so heavy as the year before, but this seas in th crop will be fully as large, if not larger, than that of 1886. He expects to make this year in his two wineries, over 500,000 gallons of sherry, white wines, ports and clarets.

List season he purchised the block bounded by Twenty-first and Twenty-second R and S streets, and has creeted one of the most extensive wineries on the Coast. The structure is brick, two-story and basement, and in size 170x170. A side track from the railroad comes directly into the cellur, so that grapes coming in and wines and brandies going out can be handled with the least expense. He has here larger sherry rooms than in the Eighteenth street place two large stills, and the entire place is filled with the latest and most complete machinery known to the trade.

Mr. Nevis says that twelve years ago there was but little wine trade. There was scarcely any home consumption, and the Eastern market amounted to but little During the past eight years, the demanfor wine was increased over 200 per cent. and there is a market for all that can be produced, though the prices at this time are so low that there is very little profit to the manufacturer. He attributes the dulmarket and low prices in a large degree to the vine growers. For some years they ic ceived from the wine makers professionals who understood their business -from \$20 to \$25 per ton for their grapes. This was a handsome profit, a good vineyard yielding a profit ranging all the way from ,

\$150 to \$200 per acre. However, the vines chief mart from Persia. Our agate comes yardist was not satisfied. He wanted to make it all. He built his cellar, bought his vats, crushed his grapes and made his wine. The next season be had has vats all full, and another crop to be crushed. The wine must be sold to make room for the nex crushing. It was thrown upon the market, shipped East, was inferior in qual ity, sold for what it would bring, and, of course, damaged their putation of the State and brought down the price of the good article. Mr. Nevis says he is not one of those who b hove in over-production, but at the present time he thinks the acreage of vines is all that can be handled, at this time, with profit $-\mathbf{H}$, however, says that the wine trade of this State must continue to increase annually, and at no distint day, the wines of France, Italy and Spain will not be found in the American market. "I don't say this because we can sell them cheaper, but because we make a better article. There is no country in the world to-day that can make or does make as fine sherry and port as California, and as to darets and white wines they cannot compare with us "

NAMES OF PRECIOUS STONES.

Many of our stone names have no more mysterious origin than the name of the place where principally found. The chalecoony is from Chale don, near Constantinople. The turquois is from Turkey, its

25,213,566

from Achabes, the old mans for the river Drillo in Sielly, where it is suff to have been first found. Jet owes its name to the Latin word for it, gay it's, from Gages, the mains of a town and river in Lycic. I'm our sard we may choose between Sardin which Pliny adopts, and send, the Persian or yellowish red. One derivate meaning ts the topic with the name of an Indian town who re it was found accoleratally by some marrym n who mistook it for adabaster Another traces it to an island in the R d See, called Topazas from a word signifying to sock, because the said island was s has t with fogs that navigators had great infliently in finding it. Most of our precions stones being of foreign importation, they beneficiter into our native mythology, as flowers or animals do, nor for the same reason do they play a conspicuous part in English poetry. Pearls are sometimes spoken of as the tears of fallen angels, or, as Sir Walter Scott says.

there these people that long have slept, These were trare which natiols wept with which we may compare Robert Herrick's account of rubo's:

And nothing 4 did say But with my linger pointed hi The lips of Julia. Some asked how pearly and grow, and where Then spoke I to my girl,

To part her lips and show them then

The Quarelets of Pearl.

"Some ask'd me whore the ratios grea-

- The trentlemon's Mapping

CALIFORNIA BAISIN INTERSTS

The Triber's editorially says, "Oregon's overwhelming vote for protection reminds Californius that they also have wool growing, as I many interests besides, which the D measure tariff would strike down The Mills bill would cut off the duty on wood, of which California raises about 40 more more pounds, and of the fruits of which California ships normous quantities to the Atlantic markets. The duty of two e-nts a pound on foreign raisins now gives some ulvantage to American growers, although 40,000,000 points even now are brought from Europe at that duty, but if it were repealed, the freight on raisins from Europe is only eight cents a box, while from California to New York the freight is thirtyeight cents per box, and the difference is sufficient to shut the products of the Pacific coast out of the Eistern markets entirely, To the Golden State the success of Cleve. land's policy means a loss of \$2,000,000 or more a year in the value of wool alone besides some millions more in the value of fruits, wine, nuts and oth r products. The Democrats themselves, no longer imagine that California will vote against its intersts and prosperity.

THE IMPORTS OF DOCK SUGAR INTO New York from January 1st to May 15th, which last year amounted to nearly 32,000 tons, are this year only just over 600 tons.

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EAST BOUND THROUGH FREIGHT.

Forwarded by the Southern Pacific Co., June, 1888.

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SSUED FORTNIGHTLY ON FRIDAY MORNING BY E. C. Hughes & Co., - - Proprietors Office, 511 Sansome street,Postoffice Box, 2366

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FRIDAYJULY 20, 1888

FOR SALE.

A Wine Press

-APT-LY AT-

Office of "S. F. MERCHANT."

MANY GROWERS are now preparing to dry grapes, in anticipation of low prices which prevailed during last season. The lowest average price for the dried grape here is 21/2 cents per pound. At three and onehalf tons of ordinary wines to make a ton of the dried fruit worth \$50, this makes \$15 for the ton of grapes. Allowing \$31/4 cost of drying and carrying to market, the grower realizes \$12, which was the average price paid in some sections last year.

This product may be packed in sacks, or what is better and less expensive in sugar barrels. The English market will prove a valuable one for this commodity, in that there is no duty on the same. Immense quantities of dried grapes are marketed yearly in France st prices ranging from 313 to 51/2 cents per pound, but the duty here amounts to 1/2 cent per pound. Large consignments of this product when sold so cheap as our growers are now able to offer, are marketable in the mining and cattle camps of the United States.

The Pacific Fruit Company of this city report that they shipped East last year aeveral carloads of Zinfandel, Malvoisie and Mission grapes received from Fresno, and that they netted the producer 312 cents per pound. They report a good demand for such dried fruit and have sent East to see how many could be used.

The following is a letter received by Clarence J. Wetmore, Secretary of the Viticultural Commission, from the Secretary of Foreign Fruit Exchange, New York:

"Of the dried grapes you wrote about, I believe there would be a margin of profit in them if you could secure a low freight. If they are any good at all they would bring 5 cents per pound, at least. There is always a chance to come in with low priced goods, although Valencias have been selling around 6 cents per pound for off-stalks throughout the season. If I could get a sample of the dried grape I could give you a better idea of their value. The market is low down in stock now and there might be a chance to work off a quantity of them,"

Boxfort's reports from foreign wine grow-thunderstorms brought refreshing showers ing districts are to the following effect: During the whole of last and the beginning of this mouth the temperature has been exceptionaly favorable to the vines at Reanne. and they are progressing in the most desirable way. After a good budding and the appearance of many grapes, the blooming began and has become general all over our district at this time. If the weather continues to be as favorable as it now is all the vineyards of the Cole will be in full bloom within eight or ten days. The pyrale is devasting in certain parts of our wine distriet, but the damage done by it is more or less considerable in the different vineyards, according as the owners have been careful or not in treating them. It has been noticed that the vineyards of all those who employed the Balbiani system of how to destroy eggs and cherrysalides of various insects, catapillars, etc., are suffering much less from the pyrale than those whose owners have been afraid of the expense and trouble that this treatment occasions. The system of Balbiani and the boiling of the supporters would very likely be sufficient to deliver the whole district from all these insects, caterpillars and worms if only every one of the proprietors would do it A small part of our district has been injured by hail already-Rully, for instance-and the vineyards in the valley of Dhenne (vius ordinaire) have suffered still more, The Côte de Beanne and de Nuits, however, are safe so far.

The yield in the vicinity of Maissac will greatly exceed that of former years; I saw a bunch of grapes yesterday on which I counted 77 diminutive berries. "Negret" dark grapes are, however, a little backward still in the Taru-et-Garonne. 1 am informed from Burgandy that, while otherwise sound, the "erinose" has commenced to afflet the vines, a disease being treated like mildew. Common wines are pretty much exhausted in that region, and desirable ones are engerty being bought up. In the Nantais, the vines are making satisfactory progress; 1887 wines are nevertheless firmly held, Muscadets at 150 francs the 230 litres, and Gros-Plants at 55 to 70.

The vines at Cognac, are now in full bloom and present a beautiful appearance. Howbeit, we have had, for some days, a succession of north-easterly winds, which are very bad, indeed the worst possible winds for vines in bloom. Moreover, the sky is overcast, and there are slight rains, whereas in the open clearings the sun is too intense, a conjunction of atmospheric conditions which often brings in its train the dropping of the fruit, or the running out of the san, as the case may be. It is to be hoped that this temperature may not lastso that vintners may not be entirely disappointed in their well-founded hopes.

As neither the mildew nor the phylloxera cause apprehension any more at the district of Rivesaltes and Roussillon, an abundant harvest is looked for, meanwhile, the wine trade has arrived at a complete standstill though small wines are held some 7 to 8 francs higher than in March and April, the range being 21 to 25 frames the 120 litres

Fine weather continues to favor the growing grapes in Algeria. The grasshoppers still threaten the Medeah, which district produces the finest wines of Algeria; we need not fear them in our own province All depends on the wind, which may still earry them in a solid column over to Tunis.

In the neighboring departments of France the vives [are doing splendidly; frequent

of rain and none of bail At Bergerae a most a most abundant vintage is in prospect; dealings have been restricted to ISS7 red wines at 500 francs

In Germany sunshin and rain having been equally distributed in the Rhenish Hesse region during the past fortnight, the vines have made normal headway. Diminu tive grapes on the tiny bunches promise an uunsnal abundance.

In Rhemish Prossia a high temperature. compled with clear weather, and occassionally a thunderstorm, with a copious, beneficial rainfall, have done wonders in vineyards along the banks of the Rhine and Moselle

Throughout Alsace the tropical heat we are having has a marvellous effect on grapes, which develop fast, blossoming now lasted some ten days. Abundance is in prospect. There has not been a vestige of disease

In the Haardt Mountain district the blossoming has this year been a fortnight ahead of last year's; the outlook is most propi tions. Meanwhile the wine trade is stagnant

The year 1881 was the one which gave Spain the biggest wine crop, yet it is estimated that the present vintage will exceed it. There are some vines on which there nearly as many clusters as there are leaves. In fact, since the beginning of May th weather has been all that could be wished for. The blooming has been everywhere accomplished.

The tropical heat that has prevailed in Hungary during the blossoming period which commenced on the 10th inst. has propitiated the latter so much that diminutive grapes are no more backward, and promise a good average yield for the entire district

On taking a general view of vintage prospects in Portugal, the same have to be pronounced favorable, blossoming having been gone through successfully, and the show of diminutive grapes promising a more than average yield.

With the sole exception of Piedmont and Lombardy, where the mildew has made its appearance on the lowlands, the outlook for the coming vintage throughout the Peninsula and island is decidedly encouraging, so much so that it is thought the total yield will not fall short of that of 1881.

EXCEPTION IS TAKEN to an article which appeared some time ago in our local papers in which the yield of raisins was divided between the great San Joaquin Valley and Southern California to the exclusion of the more northern portion of the State, As a matter of fact, the honor of making the first raisins in California is due to R. B. Blowers of Yolo county and the industry was for years confined to this section, and the valley of the Sacramento. Even to-day estimating the yield of the State at 800,000 boxs. Yolo alone yields over 125,000 boxes. nearly one-sixth the entire product of the

THE HOT weather has proved very detrimental to crops, and shrivelling of the grape has taken place at many of the districts. The drier sections all over the State have suffered most.

No fungoro diseases have been reported this year so far, not even the mildew which for every year at this season has caused so much damaged.

A GRAPE VINE pest is reported in the East, and leaves sent for scientific inspection shows that some justed had been at work on them. The leaves had numerous galls upon them, larger than those made by Phytlexera. They were about two tenths of an inch tu diameter and of a watery green color. Their location is on the veins. The foot stalks of the leaves and adjacent portions also bear numerous galls. which are large, confluent and of a pale r d color. They were submitted to a prominent entomologist who pronounces them the result of the oviposition and subsequent developm at within, of a small fly or midge known as Lasiophra vitis O. S. The insect though diff ring in habits, is closely allied to our well-known " wheat midge." By cutting into the galls one or more active, orange colored larvae may be seen, which bear quite a resemblance to he wheat midge barvae, as found in the heads of wheat and to those of the clover seed midge which have of late destroyed so anch of the clover seed in this State and aljoining territory. The larvae will soon taerge from the galls drop to the ground and bury therein to a moderate depth or pupation. About the last of June or arly in July the perfect winged insect will nake its appearance. There is no known vay of preventing the attacks of this insect. The best method of controlling it is to plack off all the infested leaves and tips early in June before the larvae have left the galla and burn them.

THE Call in editorialy referring to the Sweet Wine bill says:

An effort was made in the last Congress to relinquish the revenue derived from a tax on spirits used in the fortification of sweet wines when such wines are exported. kingdom, except in the open mountain The purpose of the bill was to reduce the cost of wines so as to make it profitable to export them. With a full Treasury and a surplus which gives the President and his party in Congress so much anxiety it was held that the Government might refund the tax on the spirits that enter into sweet wines in the interest of domestic industry, especially when the taxed wines are exported. But the Democratic majority in the House has decided not to relinquish this revenue. It will continue to collect a tax on an article of home product which is to some extent exported. The majority propose to reduce the tax on foreign-made articles of many descriptions, but when a proposition is made to give up a tax on a home-made article the Mills band of political economists object. A proper regard for home industries would induce Congress to free native wives from all tax whatever. California wines are the most healthful stimulating beverage that is used, and the manufacture of such wines is a great and growing industry. A certain amount of spirits is used in their preparation, but in the form of wine such spirits are less inpurious than in their natural state. It is difficult to conceive of an argument against remitting the tax oa spirits used in the fortification of sweet wines for export, and yet the House votes against an amendment to that effect.

Woodin & Little advertise in this issue of the MERCHANT, a double-acting wine force pump, especially constructed for this particular business, and without which no winery is complete. In prices, the firm are prepared to meet customers on a basis compatible with the merit of the machine, each of which is guaranteed.

LOWER PRINTS do not always act to the serious disadvantage of the grape grower They tend to create a demand for the bit ter types of fruit. At present some of the leading wine mickers are contracting tereshould be at not 1 to the larger Holes at Cilberts it \$10 per ten. The estimates entres of this year's crap have hartefor hen greatly exagger at d. Recent returns to the Board of Viticulture Commission from Disc King are as follows:

Alame 1a Alame ia Fresno Los Angeles Najos Sa-ranient and Nr. the Solano Santa Cruz Santa Clara 2 500 000 3,000 000 1 000 000 Sonoma Other defincts

Of this product about 5 occioon gail us will be broady, which will blave the winproduct 16,000,000 gallons

These figures are reliable and will serve to remove any anxiety which may prevaiamong growers, over the many exagger is a statements which for some time past have which have all cmanated from interested speculators.

THE BECENT exposures of adulterations in California olive oil, are timely. It is a hardship that such an industry frought such iniquitous blows at a reputation which , to meet foreign comp tines, should be maintained at the highest standard possible. It is difficult enough to find foreign; goods free from deleterious matter, and if the product of our own orchards can not be depended upon, the further planting of the tree may be suspended for any hopes of profit in the future to the grower. It is: pleasant to note that the adulteration has been confined altogether to the middle men. and that the purity of shipments direct from the manufacturers has been maintained. The only way to ensure protection from raids, which must result in destruction to the industry, is for the growers to form a market for their product in the leading . article which can be depended upon to sten. the tide of foreign competition,

A Special to Bootest reports that at an extensive wine-testing held for the purpose of selecting the wines for the use of the Casino of Deidesheim, the following houses aubmitted samples. Friedrich Seyler, Eckel Bros., Oscar Schroudt, Herm E kel, all of Deidesheim, and Reichort & Son, of Forst | part thirty, six thousand differs of in a an Of eleven brands of white wines selected, Mr. Friedrich Seyler was awarded the pulmfor ten, ranging in prices from 65 pfennigs. to 6,60 marks per bettle, and the firm of Eckel Bros, one brand at 80 pfennigs per The interest of horrowed modely a scrate i bottle. The firm of Friedrich Scyler was by the same scale. From each to fit a flow of an isoment of dry sic also victorious in the competition for fur | per very per mean with the office of relations of Francis . It was my first nishing the red wines. In this tournament, "real so crity was regularly and besides the above mentioned firms, Louis for the use of money. At Ly ; Feiss participated.

Government to reduce the duty on foreign vided they do not exceed in value of marks per hugshead, on Hamburg outering the Customs' Umon. At Bremen a similar holders of such properties I came on a current the place and the many place. movement is on foot. The fact is that a subbnesses were a Shappers on the at the results and a

similar allowane was rath to a last formations and longforeign wins at Lubsek when that by the results a total enter 4 th Castoms' Union in 1808 at 1 th Jog the english and seems nothing but just that the growil -

THE EXPERIENCE of VIII A Lister in In any parts of talifornia, tends to prove that trict Commissioners West, D. Fark and urigition is not essentility (essent) t Storesful collaboration (Dr. - r.) and Proper county, which van a Lay (F water of rayears the growing was an area pair when water was torned and a toditches. They continue to how yet a prime and cultivate the same research and were agreed by surprise to made that of a a hotogrow with her a solidating than when a rigation was for as a tap

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EARLY CALIFORNIA

Among meny other friendly accusions to California and our people in the latest prices for every article at the lag-olition of the Southern or Constraint Gold List pad for all for 2, supplies with such import to this State, should be special office of the Source in a constant of the peckets of every constant of the Month of the peckets of every constant of the Month of the peckets of every constant of the special office of the Month of the peckets of every constant of the Month of the peckets of every constant of the Month of the peckets of every constant of the Month of the peckets of every constant of the Month of the peckets of every constant of the Month of the peckets of every constant of the Month of the Peckets of every constant of the Month of the Peckets of every constant of the Month of is the fellowing exerpt from a work waith in shread in all to lesmany years ago of his to the lays of 40 pair 2 of meanings and fast in the duce it.

Henry were correspondingly onerm us building, known as the "Parker Heas ." and situated on K array street, facing the Of this sum, somewhere about sixty then higger, whose tall us are proposed sand dellars was paid by gamblers, whi ecupied meanly the whole of the second strict and which was only assured that its population of Coldinal residual of understed size or unlit at the rate of forty the said do has $\frac{1}{2}$ is ann $x = V_{\frac{1}{2}} s^2$ of the hearh $\frac{1}{2} s^2 + 0.5 s$ another corner of the plaza as error buy do ing, which might have made a stable for half codoz nohorses, was possess to by Wright & Co., brokers, under the many of the Min rs. Bank, at a r nited seventy fix. thousand dollars. The United States Het a tile establishment for a one-story building of twenty bet from pool forty thousand follars, and seven thousand delies pr mouth was part for the Custom Hais these enormous wages, rents on burns and still next tertun's to think yes! A retition is being signed by all wine Real estate, that leat a few years I for merchants of Hamburg to get the federal was of little nor worth than an its banow brought amazing prices. From Plan Co. wines in casks stored here 50 per cent, pro- twelve dellars for hity-vera it is pregradually rose to handreds, those a ds as I tens of thousands of delibers, so that have the director of me note is

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Br. Mr. SARDS C. Massell

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PROGRAMME

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THE TARIFF ON BAISINS.

(Inspatch to California Associated Press)

The tariff debate in the House was one of the liveliest of the session, and the political effect of which will be far reaching. The clause reducing the tax on raisins from 2 to 112 cents per pound was taken up. Vandever of California offered an amendment restoring the duty to two cents. He called the attention of the Democrats to the seriousness of the step they were about to take. The raisin industry in California was one of the most important in the State. It had been said that this reduction did not amount to much, when in fact it would amount to more than \$150 000 a year. He did not believe that the Democrats, if they thoroughly understood the situation, would insist upon the reduction. The treatment meted out to California so far has been anything but instice. It would seem a pity that that State was separated by the Territories from the rest of the Union. Did an ocean instead roll between them-did the Spanish flag, instead of the stars and Biggs, and his vote against it, is taken as stripes, float above California's soil, they might reasonably hope for better things. This proposed reduction from 2 cents to 115 per pound, he said, was a direct blow at a prominent industry of California, and a severe one. The producers of raisins in his district were small land-owners. It was like striking a blow at the homestead and comforts of home. It practically amounts to just as much as a robbery of the farmers. The majority of this House could not assume a more unfortunate position than the present one, favoring, as it does, foreign products at the expense of home products

McKenna followed and made a streng plen for Vandever's amendment. He said he hoped the amendment would be adopted. The industry needed it and must have it, or else it would perish. He appealed to the Democrats of the House to support it. He believed they could be loyal to their party and yet support the amendment. He thought there must be some limitation for both protectionists and tariff reformers. This industry, being a new and difficult one demanded consideration. He showed that experiment and toil had to be gone through with, and markets found for the product, all of which took time and capital. He said that imported raisins varied in price from 10 to 30 cents per pound, and the domestic from 5 to 40 cents. He expected that this year's production of California raisins would be 150,000 bexes. The duty, he thought, ought to be kept at 2 cents per pound, and declared it to be for the interest of the Democrats, if they wished to consider political reasons, to support the amendment. Representative Biggs declared that he

was in favor of protecting raisins and everything of the kind produced on the Pacific Coast, and therefore supports the Mills bill. which he thought was better protection, since it does away with the pernicious damage relate. There was no ten per eent. damage under this bill, and the protection thus off red would soon enable the United States to supply the world with raisins.

Mr. Morrow, in answer to Biggs, said that the proposed reduction was to give the product at cheaper prices, but that could not be done without ruining the industry. In a new industry like raisins, the growing of a vineyard needs from four to five years' care, with no returns to the grower during that time, and he falling in debt. He declared such to be the condition of the raisin duction would destroy the small margin of up can be afterwards gathered up and saved. full preventive against the rot, but certainly fruit.

profit now enjoyed. When the Democrats came to rice, they would retain the 100 per cent protection. But raisins they would the United States and the immense amount reduce 25 per cent. Was that just? Both were necessary for good pudding. He said most of the raisin-growers of California are poor and struggling for existence against Spain and Southern Europe.

McMillan of Tennessee snoke of the benefit that would result by the abolishment of the damage rebate.

Morrow here interrupted and said that the damage on raisins was too small to be considered a factor in the case.

Felton said that a great deal had been uttered regarding the depressed condition of American serientture, and he declared it to be due to competition at home, and said we could not afford to compete with Europe. The duty on raisins and other products should therefore be maintained,

The amendment was defeated by a vote of 67 to 77. The position of active hostility to the maintenance of the tariff assumed by signigeant of the way he will vote on the wool clause. Thompson was absent, although it was a well-known fact that the raisin clause would be taken up to-day.

The present duty on raisins is 2 cents per pound Mills' tariff bill proposes a duty of 11 cents, a reduction of one-half cent. Shippers declare that the crop of Spanish raisins will be a large one, with low prices. Under this circumstance, even the present duty is considered an inadequate protection for the ruisin-growers of the Pacific Coast.

In this connection attention is called to the significant assertions of R. B. Blowers, a prominent raisin-grower of the coast, who says: "Tinkering the tariff is rotating the business of raisin-making in California. When the tariff on raisins was reduced before, it crippled the industry. I took up a large portion of my raisin vineyard then. and converted it into an alfalfa patch, and another part of it I grafted with table grapes. From the alfalfa tract, I will get from 10 to 13 tons per acre. I am getting ready to take up the rest of my raisin vineyard in anticipation of another reduction of the tariff in the interest of the Spanish raisin-grower, for another reduction will kill the business here. We can barely make a profit now during an average year, but if there should be a good crop in Spain and a poor one here, we would not make a cent after paying freight to Eastern markets, which is several times as much as the foreign producer has to puy. The foreign raisin-maker would, therefore, drive us out of the market."

FIGHTING GRASSHOPPERS.

Mr. Geo. West of the Viticultural Commission, has been experimenting on the vineyards of Kohler, West & Minturn, at Minturn, Fresno county, with a remedy suggested through the Executive Officer against grasshoppers, consisting of using arsenic with bran, middlings and syrup. Mr. West finds the best results by using ingredients in the following propornous: Forty pounds of bran, 15 pounds of mid dlings, 2 gallons cheap syrnp, 20 pounds arsenic, mixed soft with water; a tablespoon thrown by the side of each vine or tree; cost per acre for trees, 25 cents; for vines, 50 cents. He reports complete success; that the hoppers eat greedily and die in their tracks. If the mixture is put on shingles industry in California to-day, and the re- it is the better plan, for what is not eaten

FLORDIA AS A SUGAR PRODUCER.

The enormous consumption of sugar in paid to foreign countries for it, makes its production here a matter of vital interest How best accomplish this, whether by encournitue the beet and sorghum sugar interests by bounties, whether to maintain protection on imported sugar to stimulate Louisiana's sugar business, or whether to pay a bounty on it, are questions that have for years commanded general attention. Kansas is trying to solve the question by paying a bounty of two cents a pound on all sugar produced in the State, and, as told in a recent letter from there published in the Journal of Commerce, this has caused marked activity in the establishment of sorghum sugar mills. In that letter it was stated that the factories contracted for the sorghum cane at \$1.50 per ton delivered. and as the average yield was ten tons per acre the farmer received \$15 an acre, which was mentioned as a profitable business. Theses figures are in every striking con trast with the results shown in the cultivation of sugar cane in South Florida. For several years it was claimed that South Florida in the neighborhood of Kissimmec was the finest sugar producing country in world, surpassing even the West Indies, and two or three years ago Mr. Hamilton Disston and other Philadelphia capitalists determined to test the matter. The cultivation of the cane in Florida was nothing new, as that had been done for generations, but only on a limited scale. These gentlemen went into it very extensively and built a sugar mill at a reported cost of several hundred thousand dollars. So successful were they that \$60,000 worth of new machinery has been ordered for increasing the enpacity of the mill, and a railroad is now under construction from Kissimmee through the sugar district, simply to open it up and afford adequate transportation facilities. The St. Cloud Sugar Co., under which name these gentlemen incorporated their company, in addition to their own immense cane crops, agree to contract with other growers to pay \$4.80 per ton for all the cane raised, and as the average yield is 30 tons an aere this is an offer of \$192 per acre, As contrasted with \$15 an acre in Kansas the difference is remarkable.

There is no doubt but what the country of which Kissimmee is the center is destined to become a wonderful sugar producer. The advantages for the cultivation of cane, its great saccharine strength and the absence of killing frosts, added to the healthfulness of the climate, all combine to make this certain. It is a matter of interest to the entire country that this should prove true. Should Florida ever produce, as it is possible it may, enough sugar to supply the requirements of this country, it would not simply make that State enormously wealthy, surpassing the fondest dreams of its enthusiastic people, but it would retain at home the many millions of dollars which we now annually send elsewhere for sugar, -Baltimore Journal of Commerce.

BAGGING GRAPES.

A grape grower writing in N. Y. Tribune. says: In many places this is well worth doing, merely to protect the bunches from birds, insects and from eyes which, if tempted, set fingers to plundering. The fruit becomes handsomer, and can be left Bugging does not, however, seem to be a such, or by the juice flowing over the sound

pulliates it when the bags are put on as soon as the fruit is formed. The bags should be of thin, tough manilla paper, such as grocers use, and of one and two bound size-chiefly the former if they merely inclose the thyrse of fruit. This is preferable the method of folding the mouth of the bag over the cane, one-half in one direction and the other (divided off by a short slit) in the other direction, which requires two pinnings, several extra motions, and is often impracticable where cames are crowding; and it makes the gathering of the fruit more difficult

If the mouth is folded only round the stem of the thyrse, one cut removes all together, and the bags, remaining on the bunches, keep them well apart, so that they keep perfectly if taken off without bruising. We either make one large trian" gular fold, leaving the stem show at its up per corner and pinning in the middle of the fold, or, if the stem is short, it is left in the middle of the bag's mouth and two folds are made, which meet and lap just like a shawl pinned round the neck and shoulders. The pio in this case usually includes the stem, making the wrap very close and secure. No rain can enter by either of these modes of folding, and we ent no hole in the bottom of the bag, but do not object to one; for we often use squares of paper in lien of bags. Children soon become experts at putting on these protections.

PRESERVING GRAPES.

White Smyrna figs and the White Museat grape are som times preserved together, the second crop of figs coming in season to can with the grapes. We give the rute for their preserves now, though September is the month in which they can both he had for canning: Pick the figs when their skins begin to crack, peel, weigh and allow onehalf of a pound of best granulated sugar to one pound of the fruit. Mix the fruit and sugar carefully, (not breaking the figs) and let stand over night. In the morning cook slowly on the back of your stove, stirring carefully at intervals. In the morning also prepare your Muscat grapes by picking them from their stems, washing, weighing and allowing one-fourth of a pound of sngar to one pound of fruit, (and as many grapes hy weight as figs). Cook in another kettle, using only a very little water-just enough to keep them from burning. They will cook, after starting to boil, in about ten minutes. The figs will need cooking nearly an hour. When both fruits are done, mix carefully together, let come to a boil and

Wasps and Bees.

Bees never injure sound fruit, according Wasps will puncto Popular Gardening. ture grapes, etc., but with bees it is a physicul impossibility. Their mandibles are not so constructed, nor are they strong enough to be used in puncturing fruit. Numerous experiments have been tried; among the rest, one of putting the hives in an apartment, and taking the bees' food away, and making them fast for a few days at a time, and all the time exposing grapes, etc.; but the bees would not do any injury, even under those conditions. If fruit bursts, or is injured by the birds or wasps or something else, the bee will soon suck all the juice; but that is an advantage rather than an injury to the grower, as the sound fruit on until rich ripe. And it keeps better, is apt to rot by coming in contact with

OUR NATIVE WINE SHIPMENTS SEA.

TO NEW YORK PER SHIP Inner ois, Jul	v. 13, 1888
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K & F	Kohler & Probling	20 barrels Wane	199619	
1.9	**	12 provincing one Wine	1,576	1.130
D.	**	10 barrels Brandy	175	951
A G & Co.,	A Greenbartin & Co	100 barrels Wine	1,990	2,713
	> 1	GO cases With		140
	**	10 barrels Wine	503	34-
R.G	C Carpy & Co	50 barrels With		975
J.C.		25 barrels Wine	1,231,	\$110
J.C	**	25 barrels Min :	1,285	1115
for a company of the contract		15 barrels Wine		115
M 水 C		10 bartels With	1115	240
LР ХР		10 barrels Wine	3447	230
M G & Co		24 barrels Wing	199	300
The state of the s		I barrel Brandy	1,150	500
8 \$ & Co		II burrels Wine	6552	125
: M	Stateon Books Co.	17 barrels Wine	550	255
3 M	Stream, to-me () ()	30 balf pure heoris Wine.	2,506	1 2000
РВ	5.7	20 barrels Wine	I.(001)	1,51110
C V Co		25 (um) West	1,25.	630
A V Co	Schullman Cha	18 barrels Won	850	1.00
A V Co		Lapk Wile	6.	ŝi
A Pv	Latingers and Reco.	100 barn's Web	1.1988	1.521
If P in demon 1		25 harre's Wine	1,231	135
LG in damond		12 sharr s Water	1,211	397
	* 1	Haras Willer	3,20	
			371	17.1
DMLH	+4	Leases Wille		36
гвс	k.e.	2 12		10
T B C	.,	Ly ase Wane		
P in diamond	bobbe & Yan Darjan	125 barrels Water	6.151	2,500
FAS	Win Hadschir & Co.	D barrills Wine	125	(3) (4)
**		II barrels Brands	1 >=	190
F A	faschman & Jacobi	25 barrels Water	1,279	362
S in diamond	**	(25 hurs by Wine)	1 277	361
F.A	F.F.	25 hurds Wine 20 hurds Wine	1.021	315
B B	**	20 barrels Wine. 15 barrels Wine. 15 barrels Wine.	1,015	311
A V		15 our bewin	764	250
RP	**	15 burch Wine	761 766	217
EVB in diamond	**	1. 2 7 THAT ET IN 13 FIT	1.776	605
LK		15 burrels Wine		
45	**	"I keg Wan		169
	**	1 bart 4 Brandy	1.50	125
* D K		2 Facts be Brands	5353	210
	**	2 Carrola Brands	3,212	1,02
4 & B B		I barrel Brandy	52	100
		3 barrels Wine	152	150
5 & M	Williams, Dimond & C	o(20 barrels Wins	1919.1	183
Total amount of Wine, 5			53,3 33	
Total amount of Brandy			43039	1 1000

TO CENTRAL AMERICA

	III CENTR	VII. AUSTRIAGE V.		
L S A, Guatemala	Urrela & Urmsto.	2 kras Whistory	111	5 666
BT, La Libertul	45	2 kegs Witte	10	32
M V, Champeri o	**	2 k as Wine	111	32
	E. Kemen & Co. 1	I barriwas	28	114
B & G	L S Hass	I barrel Whisky,	12	110
BBA Co	D * Flash	I hored Workey	1014	1.144
La Libertad	11	Lbarrel Whiskey	121	155
B R & C	Bloom, Byruch & Co.	2.1 irrels Whiskeyer	221	
Bha Citta	Bindin, Birth h X + +	2 hard to Wine		235
D to III		1D rates Whiskey	117	144
R&II	Diponi Bred			240
San Jose de Quut		10 cross Wine		10
M in diamond, La 1 berta-1	H.P. Payburstr	I born I Clant	5.1	10
E II, Adajuth		2 harrolet laret	100	7.55
M.M. Champerico	Eug de Sabla A Co	Diction wWith		140
**	**	2 car Whitelet		14,
J.G. Corinto	A Greenbaum & Co.	Look Water	61	6.1
a)	**	2 cases Witte		To .
B M, Corinto	1.	TO cases Witte		120
A G C, La Union	L.I. Listroit	GOVERNMENT OF THE STATE OF THE		120
F M Puntas Arenas .	B. Dreyfus & Co.	22 to 28 With	120	140
M B, Puntas Arenas	11	10 baff brook Wine		
11	**	Lake, Wen	107	.152
M C S & Co, Puntas Arenas	**	10 ki za Wim	100	100
17	**	2 crass With		4
J W & Co. Puntas Archas		55 care Wine		215
11	11	10 cases Whiskey,		18.7
Et, La Libertad	John I Wright	Likes Whiskey	10	50
D B, Amapala	14	2 kr s Winess	21	166
A & S. Amapula	**	18 kg as William	(8)	72
Y P P, Amapala	11	1 ke as Witte	40.	25
L B, Amapala		Water a Batte	941	30
8 8 Pg . 5 14 16 1 74 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2 cases Whiskey.		10
b)		2 cases Brandy		
R V, San Juan del Sar		2 kags Wine		.311 231
	s for house a fine	76 cases With	2.1	
D de N.M., San Juan del Sur	5 Lacinnan A Co			2675
M S B, Gustemala	L at Tittoco V (,)	100 cases With		1,000
		22 kegs Wine	220;	250
J L T, Guatemala .		Marie Ragen Whitelean	2411	300
**	11	4 barrel Wine	101	601

CEN1	RAL.	AMERICA	Contitution by

SS, Corinto SA C, Sar de Quit P I - Champerto L CL, Phamperto E I - Pantas Arenas P N, Comperso	S. I. Carte Brown	11 horse (10 km) War 10 km - War 2 com (8 War 10 km - War 2 com (8 War 2 com (8 War 1 km) War 1 km - War	30.00.3	194 35 44 36 236 32
Edd and and a	Who MTS construct Whisk to Bloom and Brandy Mossey on t		1.791	3,836 1.3595
	10 3	MI \1co		
M.L. Sin Blis L.V.R. Mazathir	Calmer, Roper, C	5 5 6 4 (g.7 (41 5 W))	3001	8112 11
C. Rob. A. Marathan A.C. San Klas E.L. Jonala	Etonol's Con-	Style Is Williams	136	100
M.G. San Blas F.B. San Blas	W. Leanza	$\frac{20 - e^{-e^{-h}}}{2 + e^{-e^{-h}}} = \frac{W}{W} + \frac{e^{-e^{-h}}}{2 + e^{-h}} = \frac{W}{W} + \frac{e^{-e^{-h}}}{2 + e^{-h}} = \frac{W}{W} + \frac{e^{-h}}{2 + e^{-h}} = \frac{W}{W} + \frac{e^{-h}}{2 + e^{-h}} = \frac{e^{-h}}{2$	11 55	29 29 93
V O C. Mazatlan E tal wa unt er	When the second	15 or W.,	= 210 9.99	150 8706
	$\Gamma \cap -\Gamma$	181111		,,,,,,
1 k	Colora Residen	1-24 With a		-182

MISCELLANEOUS SHIPMENTS

DESTINATION,			0.811058	LILLE
Santa Resalia	. Salmoon	Bark	3.3655	S1.225
Puntas Archas	Supt in	b oner.	6.1	1.3
Japan	Prost Ashiling	St. Direct	2.110	730
Antona	Uniatella	50 1007	176	£70
Kahulin . , , .	J.D. Spec Joels	Brig.	26	22
l'aluti	Tropo bird	Parketers	1.730	611
China	4 + 3 + 12	Steamer	101	65
Fugland :	hrby	Ship .	0.826	1,550
Scotland	**	Ship	60	15
Ireland		Ship	10	10
France	* * * *	Ship .	300	75
Total			11,611	81,516

Total slippiorits by Panama strangers. Total Miscellane his slippinents Grand totals 263 080

CHALLENGE

Double Acting Wine Force Pump

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THE VINE AND ITS FRUIT.

(Continued from page 10%)

The Romans were great wine-bibbers. At all their banquets and at the celebration of their public games wine flowed freely. Every rich Roman must have his private wine cellar, with wines, "rich, rare and old." Hence the vine was cultivated generally even to the neglect of more important productions. The soil of Campania was peculiarly suited to the growth of the vine. In that warm climate the fruit could not long be preserved, and hence was rapidly made into wine and scaled up in jars and placed in the cellars to remain possibly for an age of ages. In the excavations at Pompeii some of these old winecellars have been unearthed and the amphore or clay wine hottles have been brought to light where they have been standing in the sand for seventeen centuries. The historian, Pliny, tells of fifty different varieties of wine in use among the Romans. So much the worse for the Romans-for where are they to-day? Roman luxury and licentiousness led to effeminacy and made once mighty Rome an easy prev for her enemies. But they did bring grape culture to a great stat of perfection. Instead of posts and wires they attached the vines to trees (arbusta). The elm and poplar were used most commonly, and the vines were spoken of as "married to the trees." They grew, when planted in deep, rich soils, to the hight of thirty or forty feet, and, even in poor soil, eight to twelve feet. Their vintage season was about the same time of ours-the latter part of September and through the month of October. The grapes were gathered in baskets and carried on the heads of slaves to the wine-presses. There they were trodden by the feet of men, (calabantur,) and then afterwards pressed after the manner of the Egyptians. This juice would pass the fermenting stage in about nine days. Thus all the nations of history have been cultivators of the grape and users of its fruit Such will be the case to the end of time. In this lake region of ours we are in our infancy compared with the lands of which we have written in these papers. And yet we are afraid of "overdoing," and sometimes we fear lest the business of grape raising, as it is often expressed, shall "play out." There may be temporary overdoing; the markets may sometimes be overstocked and prices be low, and all that. But let us remember that the grape "came to stay," and that from the days of Noah to the present hour the business has never permanently failed in any land. There may be an occasional blights, frosts, hails and other hinderances and discouragements: but while time endures, people will eat grapes if they can get them. The grape vine by its thriftiness and persistent life along our lake marging and everywhere else throughout the whole earth, as it flannts its green banners in the breezes, fills the spring air with the delicious aroma of its flowers, and then in autumn bendunder the weight of the purple clusters, says, with Tennyson's brook.

"Men may come and men may go, Eut I go on forever."

NECTAR FOR THE GODS.

Shirley Dare, in last January's number of the American Garden, gave a splendid indorsement to the pure, unfermented juice of the grape, well calculated to interest beverage, he says:

"It is the most beautiful liquid in the world, deep, rich in color as fird gems; all fermented wines being pale beside it, for they are diluted, while this is the full blood of the grape of that 'sweet and divine odor' which Homer gives to the 'sweet black vice', the priest of Apollo gave Ulysses, and which was the fresh grape juice boiled thick and unchangeable by time. But it is not a mere indulgence, for all the reviving which wine gives, this grape juice gives, with no reaction. Its effect is simply wonderful in restoring strength. I must write strongly of it for it is what I have been wanting all my life and never found before, something that would put strength into weak arms. and steadiness in tired heart beats, clearness in the working brain and sense of well being in the whole frame, and leave it there. For years, daily, after working up to eleven o'clock in the morning, there has come that reaction, the fatigue that writers and nervous people know, that no food or medicine, ever seemed to relieve, and which made the rest of the day's work a dragging effort. A glass of grape jnice changes all this, and on three or four glasses a day, I work with an ease and sustained strength which makes a novelty to myself.

"It is the food and drink both, like milk, only a thousand times better; and though no vegetarian or dietist. I had rather live on cracknels and grape juice wholly, than go without it. It banishes bilious and dyspentic symptoms, hamors and consumptive ails like magie. Here I stop, not for want of more to say, for this subject is barely begun but it is best to leave each person to test it for himself. It is easily done. Anyone can sque ze a pound of grapes in a towel, and strain the juice for drinking at once, after the imperial court fashion ages ago A delightful little hand-press, with porcelain sockets, sold for two dollars, does the work much better. Once people get a taste of this blissful fluid, there will be no danger of raising too many grapes in this country or any other, especially as it is perfectly easy to put up this pure grape juice so that it will keep unfermented, unchanged, fresh as when it left the cluster for twenty years. Don't say it can't be done. It is done, has been done for centuries.

"You can taste it in New York shops fresh from the press before your eyes, and bottled for years, and you can't choose between the two. The grape-grower, whose intelligence provided this treat for the publie, has done a very good thing for his own profit, but a better one for the country, both for growers and consumers, and the next five years will prove the strength of these words."

The "Kuiffer System" Condemned.

D. S. Marvin, of Watertown, does not favor the "Kniffen System" of training the vine: for while it has the advantage of doing away with the old wood of the arms, it has two great defects. Its lower arms in a few years are useless, because the sap will all go to the arms upon the upper vines and deprive the lower ones of nutriment and thus fail. Again the main trunk will, in spite of all that man can do, clog and fill up so that the sap can no longer circulate freely, the same as in every other except the renewal system." These objections seem to be conclusive against the sys tem, unless it shall be materially modified; and until some other method of training is made knowa, the grape growers of our thoughtful men and command public atten- region had better follow in the present tion. Of this thoughtful and health-giving well-beaten path, and train in the old way. bernet-Sauvignon, Carbernet-Franc, Vertion. -The Vireyardist.

CONTRA COSTA RAISINS

A subscriber, whose knowledge of raisinmaking in Spain is instructive, writes to the Contra Costa Sun as follows:

The viticulturists of la Vega make their raisins from the Muscatel grape, a grape similar to those raised around your beautiful town of Concord. They are grown only on the plains. The grains are large and fleshy, the epicary thick which protects them from alteration. The bunches are gathered with great care, and the defeetive grains are taken from the bunches with scizzors. They are exposed upon the passeras-large rectangulars of at least 60x 100 feet-facing south-east, with a wall huilt a foot high and filled in with black sand or pulverized slate, so as to augment the absorption of the heat of the sun. There are footpa hs about 9 foot square for the walkers who turn the bunches that remain in the exposed snn, which is done with tongs, cutting off at the same time any grains that are not sound. Becoming dry, the raisins are transported to the warehonse where the workmen out them in hoves. The grapes that are the most perfect are spread on leaves of paper that separate the layers. The raisios sell according to their age. Malaga raisins are named pasas de sol, indicating that the sun was their only confectioner.

Alicante having a weaker autumn snu than Malaga, the grapes are dried in ovens, after a preamble in a lie of oil and ashes. an immersion that facilitates their dessication. These raisins are named in opposition to those of Malaga, pasas de legia. They can only be considered as a counterfeit, for they have neither the finest of aroma nor the stability of the raisins made in the Glen-Terry, Alhambra and Langenkamp vineyards of your excellent county of Contra Costa.

The people of the United States are their best customers. California is yearly making inroads in their immense trade for the reason that your raisin-growers are producing as fine and as low priced a raisin as the most superior made in Malaga. In fact, generally speaking, you are supplying your people with a superior article from your own vineyards, than are imported from Spain. You have the Asiatic continent to the west, the Pacific Ocean washing your shores, and a large market in China for y ur wines, where there is no tax or duty for its entrance. The Chinese are working like beavers to break the opinm bondage they are held in. Will wine accomplish it. Let our merchants meet the English in oriental markets. Possessing the best soil in the world where the vitis vinifera flourishes to perfection, be awake to your interests.

TWIN FIR VINEYARD.

This vineyard which embraces some ninety acres or more in Sonoma is the property of Joshua D. Tucker, and was taken in hand on the 22d of October, 1886 - At that time the land was covered with timber and brush which yielded many cords to the acre. At present some sixty acres have been cleared and it is not too much to say that from the time the work was begun to present day the change reminds us of a transformation scene. The majority of this sixty acres is now planted with many vines of the choicest varieties of French types, The well-known Semillion Muscatel de ary, then notions the care of orchard or Bordelais, Sauvigoon blanc, Merlot, Carbernet-Sauvignon, Carbernet-Franc, Verdeot, Tennat, together with other choice of Cotober.—American Agriculturest.

specimens are to be found here. Mr Tucker has experimented as to the advisibility of growing olives and thirteen months ago commenced plating small enttings round the main and cross avenues. . So successful a growth have these shown, some of which reach eighteen inches in height in less than thirteen months, that Mr. Tacker contentplates very abortly to plant ten thousand trees most of which we understand are already contracted for. Mr. Tucker bas evidently studied the modern id as of our best viticulturist and planted his vines sufficiently apart to give plenty of room for their growth. Some of these vines are planted 8 ft. by 8 ft. We understand when the time comes the vines will be trellaced. The surface soil of the rauch is a rich sedimentary deposit of sandy loam about eighteen inches deep overlaying a hed of yellow marl for about eight or nine feet in depth; beneath which is strata of rich sea sand. At a depth of 110 feet, in digging the well. a mass of clam, cockle and other small shells of different varieties was found, also part of the vertebræ of a whale clearly it dicating that "Twin Fir Vineyard" was once a part of the bottom of the ocean. Forty thousand vice entting were planted obtained from Clarance F. Wetmore of the State Viticultural Commission, and at the end of the first year it was found that only 600, or one and one-half per cent., of the enttings had failed to propagate, While this speaks well for the quality of the cu!tings and the care and judgment used in planting, it also shows the more than ordinary adaptability of Vine Hill soil for vinvard purposes.

Mr. Tucker has gone into this investment as a husiness proposition and though much labor and a large sum of money has been spent in bringing this property, and so rapidly, into its present condition, the expenditure has been as economicol as was consistent with early success and financial reward. The entire control and management of the ranch is in the hands of Henry T. Tucker, Esq., brother of the owner, who devotes his whole time to every detail, and in justice to him, we say, that if pature will do her part as well as the manager does his "Twin Fir Vineyard" will not only yield ahundance to its owner but be one of the best paying properties of its size in the

COIN TALKS.

The returns of savings banks from California lead the list, the average being \$788 for each depositor. In France, more than 2,000,000 depositors are credited with \$503 each. In Rhode Island the average is \$501: in Vermont, \$361. New York has an average of \$349, and New Hampshire, \$355; Massachusetts has \$309; Maine, \$328, aud Connecticut, \$255. France, as is well known, is one of the most thrifty conatries in the world, and the saving habits of her laboring classes are remarkable. large average shown by California is proof of the claim that is so often put forward for that State, that wages are as a rule higher there than elsewhere, and that the expensa of living, particularly of food, is less than on the Atlantic sea-board, and that the climate is such that labor is employed during all the year. There are none of thosa long breaks in employment which occur in the States of the eastern and central parta of the Union. The grain fields are plowed and sowed between November and February, then follows the care of orchard or

A GREAT WINERS

One of the most important, if it if the search is it is the grape-grower whose P. Waltenbaugh fithis very lass most important enterprise in Santa Rese, and sport Bittir work for your neight triving for lifting fadlen vines where commens I planting vines in 1803, and grow operfit or crop. Iaid out a vineyard of twenty acrossion of Souther states and transfer in Santa Rosa. The Santa Rosa winery soon, nore or less inpury to the vines. exceeded the home place in extent of busic of approximation bugs, mode of specially ness. A few years ago, the building building from a query water-proof and practically This building is the lower one in the rear turn 1 by a firm in Penad Sphia, of the main and larger cellar, and is 100). Mr. Espendoub, one of the most extinsold the Cloverdale branch winery, as we man wood, weaker on a base?" have said, to Sink, Lambert, and others if that place, and commenced the building which stands in the foreground of the eastern view of his property, and part of whose interior we also represent. This building affected by bottles of drift rent manufacture is also of brick, and like the first one, twstones high, but has more elevation. The two buildings with the yard, offices and capacity of the establishment is 1,000,000 which is necessarily a large establishment. crashing room is furnished with two crashers and stemmers, each having a capacity of six tons an hour, fed by transway trucks running up from the scales. The distill ry is in a detached building, and is fitted with two stills, one for pummace and one for wine, Mr. De Turk has been for y arrecognized as one of our leading vit.cuitu rists. For two terms he has head the hearorable position of State Viticultural Commissioner for this district, and has always been respected as one of the most experienced and practical members of that body The vices of Mr De Turk are well-known all over the United States, and it is no un ommon thing to see a train load of cars | leave his warehouse loaded with wine for Chicago, St. Louis or New York Mr. D. Turk has gained a reputation for the purity of his wines, and has always been in un-Isaac De Turk.

The MERCHANT has a large circulation in the Fastern States and Europe.

GRAPE GROWING OBSERVATIONS

is I De Turk's winery. The buildings cloring via yor list by the day or month, cotting or clod-mashing. Two corresponds to the occupy an entire block between their chainful and at moderate wages, their undertake to and Adams street. Mr. Isaac D. Tarkas, cative? I and on which you cannot expect, we believe, a native of P nusylvinua, and well are is mable digree of certainty, to softer end of the strips as in a fast or it?

Santa Rosa. He increased this vineyard of by strong to support the vines when in and added a wine cellar. Later, to take for it is still fruit. To have them break advantage of the great quantity of grapes. I ware a shear and heavy wind is a miscoming in from small viney rids in the visit forting and a laborious ploto straingthen cinity, he established a branch winery in to me at drain, and is days attended with

wood, was partially destroyed by fir , and itelestratible, were shown by President water being scare , the contents of the vits A. W. P. are into the in indersof the N. J. were used to extinguish the thanes. Mr : State Hortzenhural Society at the last De Tork immediately rebuilt with brick, poeting in Ir nion. They or manufac-

feet by 66 feet, two stories. About this six and successful vineyardists in Kaisas, time, Mr. De Turk, to save freight on gaves his rule for printing grap vines as grapes coming from Cloverdage, opened a todays of Iran away from a three-yearsmall winery there, and sold his origina old vine in good condition all but twelve home vineyard win-ry. He also I ad out a feet of new wood, divided lamong the difnew vineyard on a rich slope on the Santa ferent bran hes, and train the arms of the Rosa and Glen Ellin road, with the finest vite as much as possible in a fan shape on varieties of foreign grapes. Mr. D. Turk the trillis. Give obler and stronger vines

BOITLING WINE

The curious discovery is report d from France that good old wine is differently

Wine k it in so-called Rouen bottles inprivis, while other bottles seem to impart the harsh thivor of new wine. The chemist distillery occupy the entire block, and the Policy to also so far as to attribute the change which wine kept long in bottles gallons, and the estimated stock of win- on undergoes, to the action of the ingredients hand at the beginning of this year was said used in the preparation of the glass. It to be 700,000 gillons. The cooper's shop, up are that an unite admixtur of lime and magnesia, which are often substituted is on the block opposite to the winery, and for sody and potash on account of their does not show in the view. The winery is the approximate injuriously upon the wine. said to be the largest in California, that of In this it attles in which the wine naturally Senator Stanford, at Vina, excepted. The improves, the proportion of lime is found n to exceed 15 or 20 per cent. | Exchange

San Francisco Savings Union. SEE CALIFORNIA SE CALIWES

F IR THE HALF YEAR ENDING WITH THIR 12. TSSS A regiond has send desared 2. If or and no half 45, 187, 101 per 6. I no by sets and three and three fourth rest per visions in Ordinars Deposits, free pages on and after MONIAY, 22 July, LOVELL WHITE, Cassion.

Dividend Notice.

THE GE MAN SAVINGS AND LOAN SOCIETY, 150 of a track street. For the had your ending to 10, 1885, in the fail has been do ared at the est. of the control of a control of a control of a control of track street, and track of the control of a
FARM FOR SALE.

Two handred acres in Sonoma County, compromising appoint of advocates of ten minutes drive from radical station, stretching, flavoring, coloring and other Forty acres planted in the finest variety of schemes of that demon of the wine cellar, vines. The babance rich river bottom, and the so-called "chemist." Mr. De Turk's rolling land capable of the highest cultivagreat specialty is his clarets, but it is hard, tion . S veril never failing springs and to decide whether his choicest product is plenty of eak and redwood timber on the his claret, or his Riesling or his brandy | property. Good house, large barn, and Mr. De Turk makes sweet wines, both red out buildings. Scenery, climate and reads and white, and sherries. Santa Rosa may nueve-fled. Good fishing and hunting in well be proud of its enterprising citizen, the neighborhood all the year round. One f the most degant and profitable suburbanhans in Northern California

> Impure of "W H.," office of the San Francisc - MERCHANT.

A VINEALITING DEVUE

P. Wiltenbaugh fithis v. vilas a in of stallar joined at one and so as to time in angle of about thirty digitise. The the cultivator, clo l-masher or wood 1922 at in such a way as to our without wire atend ferward, from on some roots escape the ground. The joined only thas ship under the folian bushes, and in super there is easy to States, and Territories strip gently lifts them, who the late derar other implement person all r. The are used, one on each side. In this way it is possible to sur the soil of the Arraya I and break the capillary tales throads the season Liberrance React

Six Lass on Car July 1, 1899 Th. B. lete t Mirranti. Agincy r. pris 421 to or son the Provide States and I reserve in a first six months of 1888 with issues 5 5004000 and hadging \$6. isless as apprel with 34% for the will a with courte \$5,128 881 3 11 d. n s 515 957 129 and 423 for the or of the great month in 1997 with two

The first of the post six in in his cre-

7,150 13 T a)

Satscribe for the MELCHAST.

The Mer Hastis countil wine purnal

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LIQUID ALBUMENS,

Begins a featherful fill the result. With a feet to a garden, to super ement for the base seed of rest best of the string stream that the fill international feet in the fill are the seed of the feather than the feet of the



NC.

LIQUID ALBUMEN FOR RED WINES.

Zauf to the to I'm bridy and bort

VB

LIQUID ALBUMENS FOR WHITE WINES, Rosam, Gute by Scatern s. Sp. rry and Malara, also for distilled Cabirs, Whiskey, Cenastra etc.,

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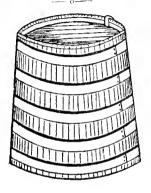
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- with the ferments, myoa man de etc. ad propi and sine able and the lee

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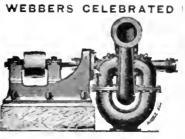
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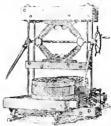
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VOL. XX, XO, 9,

SAN FRANCISCO, AUGUST 3, 1888.

PRICE 15 CENTS

REGULATING THE VINTAGE.

Instructions to Inspectors of the Board of State Viticultural Commission.

In view of the present outlook for a large crop of wine grapes in the coming vintage, many wine makers have been induced to burry their wines into the market at ridiculously low prices, causing a comparative stagnation to the industry in many wine producing sections. This, angmented by the evil effects of exaggerated estimates of the expected crop of '88, have greatly demoralized our grape growers who follow the example of wine makers and are already offering grapes at prices which will not suffice to pay more than one-half the expense of cultivating the vineyard.

We loo's to the future for parmament relief from these improper causes. Correct congressional legislation must be our ultimate redemption. The increased consumption of our wines, which increase amounted to over two million gallons in 1857, will assist us in a few years, but in the meantime many growers are threatening to pull up their vineyards and sacrifice to the tempurary glut the results of great expense and | wine. years of patient labor. Our vine growers generally have used all means within their power to spread the use and popularity of their pure California wines, but notwithatanding all this, the fact now becomes plainthat last year's ruinous prices for wine grapes are not only apt, but are sure soon to prevail and even lower figures are threatened in sales already made. The dealers tell us that over-production is the cause of the present condition of the market therefore let us face the music and if a mutual understanding can be reached among growers - the dealers and makers assenting in advance there lies within their power a means of at least partly remodying the evil.

The objects of this paper are to call upon the vineyards to in each different see tinn to unite in their separate associations, in an endeavor to so diminish the production of wine in the approaching vintage as to insure paying prices for the grapes. Incid-ntal to this it becomes necessary for the inspectors and officers of this board to following advise and instruct their co-laborers in the various means of disposing of that portion of their grapes which they may decide to withdraw from wine making.

For the consideration of the various local againzations throughout the State, I suggest the following, which, generally supplemented with appropriate details will fur aish num-diate relief to the grower, and increase permanently the stability of our future wins markets. Let it be decided that one half the grapes produced in the locality shall be withheld from the wine maker. unless the sale of the whole of any vineyard can be made at an average price to be decided upon as sufficient to properly compensate the grower in that district.

It is estimated in some places to cost on an average \$15 per ton to raise and deliver graps s, if this bethe price decided upon, let each grower sell one-half his crop at the best price obtainable; with the understanding that the other half can be sold only on condition that the price of the whole shall average \$15 per ton or over, this will induce each grower to demand a high figure for the first half in hopes of thereby becoming enabled to sell the balance. If the first half be sold low, the second half must reach an unprobable figure to enable him to sell,

Again if there be any classification of grapes in the locality, only the most desirable vin yards will be made up antirely into

It is known that for many reasons scrious difficulty is encountered, induing vineyardists to join and remain truto common understanding of this inture. This is the case particularly when the industry is in a presperous condition, and when the regulations impose any scrious penalty or expense on compliance, but here and now there exists a condation of affairs very different. If one-half the grapes be withheld from wine the price of this latter commodity still plentiful in the cellars of the maker, held unsaleable since last year, will advance in value. Thus the measure brings r hef to the wine maker as well. He, too, hails with equal pleasure this means of reducing production

OTHER USES TOR GRAPES

To the producer of grapes there comes no penalty with the proposed plan, for at the low prices now promised there is hitle shift. culty in disposing of the unsold half crop from four to the at per gibear by other means, among which are the

- 1. Drying.
- Distilling
- Vinegar making
- Solling fresh to local markets

use or sal

DEVING. By this in ans, it has recently been demonstrated that the grap's may be made to not the grower from twelve to twenty dollars per ton-varying with the adaptability of the locality for the process. Many carboads of dired wine grapes were shipp d from California last year, the lowest price realized being 31 cents per pound. this sallowing 3 dollars per ton of fresh grupes, for the expense of drying eners the grower eighteen dollars per ton for fresh grapes. be they Milvotsie, Zinfandel, or Mission. B tter prices than this will doubtless be realized, for it goes without saying that 31, c ats per pound for a healthful dired fruit like raisins, will all up an immense demand from home markets, not to mention that of forcion countries.

Distriction. Here, again, is an important means of disposing of the half surplus which may arise, a means to which certain localities are particularly adapted, and for which they are provided with abundant appliances, even with the present low price of brandy. All of our surplus could be worked off at ton to twelve dollars per ten for the grapes, prices paid in some sections last year for grapes of inferior quality, and figures which would at least make the grower even, when camputed with the better price realized for the half of the grapes sold to the wine maker

Viscour. Siles were made of sported white wine last year to yinggar makers for 14 c ats per gallon. Much more was desired of this wine than could be had at the pites namel. Noarly all red grapes may be used for wine you got it proseed without fermenting, their by obtaining a white wine the only kind d sired for vineger. The pays the grown courtwely dollars per tor for the grap s, besides assisting to previd the public with a he difficult sal stitut. It is the vinegar so commonly as I and denommated as cilla vin gar, is tub Lat 15 waits to 25 cent. pergall is, but which, margarity is only vinegar and betrome than spirits the by product of yester of dietur which vinegue is the new Alts the frede at

Local markets with if properly managed, take great quantities of home in idoving in Vin gar properly mode from war Where known to be pure wine vinegar brings from Ever and averagen will include to harry 25 courts to 50 contispers allowed all. These the matter and treasonable some arriver prices, it realized by our cope growers, below of the product to be formed

5. Boding into the question for domestic would make the grapes for execol their present wine value made up in this shape,

These obares.—Grapes shapped in bulk to local markets, to the markets of the large towns, or those of San Francisco have where not packed expensively usually realized satisfactory prices.

There has grown up a larger demand for grapes in bulk, among the Italians of San Utancisco, who make therefrom a cheap This manufacture interferes but little with the demand for sound wines made if the vineyard, as they, by their own processes, are able to extend the volume of the product into cheapness itself, and thereby obtain what they are otherwise unable to buy

The amount of grapes used fresh in the towns is found to be greatly increased by dianing the in at growers' prices.

lionano anto symppe A very healthful uticle of distimay be prepared by ordinary bealing of the pure or must of the grape. the uper syrup may be obtained by this means them by any other. Many years ago who ugrates were very low, growers found an important outlet by this means: the same being sold through the trad in jars and kegs for family and lomestic use. Large quantities of this product are annually consumed in sweetening Ports, Sherries, An-20 living other

Me are of disposing of the surplus, other than the above-named, will suggest themselves to the growers of grapes in various sections, and it will thus be found that it words only a proper appropriation of the sa a of our grapes for purposes other than who making to consider graps growers, wins in illers, dealers, ac solk that the plan indicated for reducing temporally the yield of wire, thereby improving values are of only possible, but enturity feasible."

F H WHILLIA,

THE NEXT ISSUE of the MER HANT will conon reputs tower! I if the instance of the State Van acture to a assion from tops now is, that i how the lift rent into sof the State our this will be bised the otherd streets of the meaning rgs. So to their torrist on the virion outes at members, and the work of systematical has been drawn thorsby.

FECUNDATION OF PLANTS

A recent bulletin issued from the Experiment Station of the University of Minnesota, contains the following interesting information on the natural and artificial fecundation of plants:

We are in the habit of hearing much about the means used for improving our fruits, vegetables and flowers, and I thought a few remarks on this subject, in a direct, practicel way, would be interesting.

I design, first, to indicate how fertilization in plants may be accomplished naturally, and then, how it is done artificially. To make myself the better understood, I have thought it best to define, in a general way, the great divisions of our cultivated plants and some of their fruits.

Plants are divided, according to the length of time they live, into three classes Annuals. Those which come from the seed, and produce seed in a single season as beans, peas, corn, wheat, outs, barley and the like.

Biennials. Those which live two seasons come from seed one season, and die the next, after flowering, as:-turning, beets and carrots.

Perennials. Those which live from year to year, as our forest and fruit trees, shrubs, grape vines and horse-radish.

A flower is that part of a plant in which the organs of reproductions (stamens and pistils) are situated, and which consists, principally, of a single group of these, surrounded by a floral envelope (the calyx and corolla). But the organs of reproduction and the floral envelope are modified leaves.

The general laws which govern life prevail in plants, as in animals. They have organs of nutrition and organs of reproduction; but there is nothing in plants corresponding to the mouth and stomach and alimentary canal of animals; and antrition takes place in a very different manner.

The organs of reproduction in plants are not permanent, but fall off after fecundation has taken place. Fecundation or crossing in plants can take place only when the plant is in blossom. For this reason, there is no danger of bicunials, as carrots and parsnips, crossing the first year. Nor will plants like potatoes, artichoke, horse-radish, raspberries and strawberries when propogated be offsets, divisions, runners, enttings or layers, fail to produce like the original. One should bear in mind, however, that these may be changed to a great extent by selection, and that at times they may sport.

As an illustration of the great improvement and the changes wrought in the plants by different methods, I have chosen the strawberry, because it is well known, and because it offers a very strong illustration of change under cultivation. In 1746, there were known, in France, where this fruit was early cultivated, only three kinds of strawberries. The varieties of the present day are almost innumerable. In the parentage of our cultivated strawberries. enter, perhaps, five different species, of which the Fragaria virginiana, or our common wild strawberry, bears the largest fruit. A comparison of the fruit of this, which is small, even when developed under the best eircumstances, with the fruit of such a variety as the Sharpless, which, under special cultivation, has frequently been produced three inches broad by two inches long, will show the great change made in the size of the fruit by cultivation

fertilization, and the selection of the best of each kind.

Let us for a moment glance at the construction of the strawberry blossom, where the originating of these changes must com-

The strawberries have two kinds of

1st. What are called perfact or hermaphrodite blossoms; that is, one in which both the male and female organs are fully developed. Examples of which are Wilson, Iron Clad, Capt. Jack and Countess.

2d. What are called pistillate; or blossoms in which the female organs are alone or mostly developed. Examples of which are Crescent Seedling, Manchester and Minnetonka Chief

We find these blossoms made up of sev eral parts; what would be termed the outside of the blossom before it is opened, and the under part of the blossom after it is opened, is the calyx, and is made up of ten separate pointed leaves, each of which is called a sepal. It remains on the berry when the fruit is ripe.

Just above the ealyx, we come to a circle of five white leaf-like structures, which is the corolla; and each separate leaf is called a petal. Now, if several sepals are very carefully pulled off of a staminate variety where they separate easily from the stem. we find growing to the bottom of them. several little yellow appendages. These are the stamens which are the male organs of the plant and drop off after fecundation has taken place. These are made up of a little stem with a swelling at the top. The little stem is the filiment, and the swelling at the top is really a little pod called the anther and is filled with a fine yellow dustcall the pollen.

If we now remove the rest of the corolla and the ealyx, we have left what appears to be a very small strawberry with delicate hairs growing up all over it. These bittle, delicate hairs, with the little swelling at the base of each, constitute the pistils or female organs of the plant. Each of these is made up of three parts; the stigma which is a little sticky enlargement on the tip of the hair; the style which is the hair itself connecting the stigma with the swelling at the base, which is the ovary or future seed.

The little strawberry itself, or what is left after removing the seeds, is called the receptacle because it holds and supp rts the seeds or ovaries.

In order to have a strawberry produce fruit, it is necessary that some of the dust or pollen, from the anthers of the stamens come in contact and adhere to the stigma of the pistils. By this means, fertilization or fecundation is produced and the seed is

Without this fecundation no seed would be formed and nature apparently is not berry unless she in turn can use it as a resting place for seeds. For unless the strawberry can produce seeds, we have no

And just here another interesting feature comes in, and that is the fact that no matter how much pollen from an apple or pear tree or current bush, or any other dissimilar plant, may come in contact with the pistil of the strawberry, it will not fertilize

The strawberry requires to be fertilized by strawberry pollen, the apple by apple These changes were brought about by cross speaking, with pollen of similar varieties, grapes are dried and sold at 21/2 cents per months in Livermore Valley.

On account of the above reason, it has in practice been found necessary, for the best success in planting such pistillate varieties as the Crescent Seedling and Manchester, to have at least one low in every seven of some strongly staminate variety, as the Iron Clad or Wilson. These latter have abundance of pollen to fertilize their own fruit and that of their neighbors. Carmust be taken, however, in securing a staminate variety for fertilizing a pistillate one, that both shall be in blossom at the same time, or it will not produce the result desired.

Pollen is distributed in strawberries by insects and the winds. The anther bursts open when it is ripe, and its pollen floats on the air and is very much diffused, or some hee in its wanderings and investigations for honey, lights on the staminate plant, and the pollen collects on the hairs on his legs and then he may go to some pistillate variety, where the pollon grains on his legs come in contact with the sticky end of the pistil and is left to produce feeundation.

Where strawberries are grown with a view of producing new varieties, fecundation is done by band. For this purpose, three tools are required; a camel's hair brush, a delicate pair of seissors and a piece of fine muslin. If it were decided to cross two such berries as the Iron Clad and Chas. Downing the way of precedure would be something after this manner. As soon as the Iron Clad is in full bud, and before the blossom is opened, it should be covered with a little muslin hag, or wire gauze, which fits snug up to the stem, though wide enough at the top to allow the flowers to open. When the blossom has fully expanded the muslin should be removed, and the stamens carefully cut off below the authors. The muslin is then replaced. In a few days a camel's hair brush is brushed over the stamens of a Downing berry, which has plenty of pollen dust, and then touched lightly to the pistils of the Iron Clad, when some of the pollen dust will be found to adhere to them. The muslin is at once replaced, and when the blossom begins to fade, is removed altogether. The plants from the seed of this hand-fertilized berry will partake of many of the characteristics of both plants.

The operation would be the same when a pistillate variety like the Manchester was to be fertilized; but there would, in all probability, be no stamens sufficiently developed to need cutting off,

WINE OIL RAISINS, WHICH?

The 1888 crop of California wine is estimated by the State Viticultural Commission at twenty million gallons. The wine market is dult, and the most hopeful prediction which we hear of price is fifteen cents per gallon delivered in cellar at San Francisco willing to develop a Inscious receptacle or next spring, clear of all charges and expenses, and all costs and allowances of handling, storage, insurance and loss by ullage, to that time. Predictions of considerably lower prices are not wanting Assuming 15 cents as the price, and 130 gallons as the net product of a ton of So every corner is utilized, and made to grapes allowing for ullage, we have, as the outcome of a ton of grapes, picked \$19,50, placing expenses of handling after picking, through the winery, the caskage, insurance, freight to market and all expenses to cellar here, at \$7.50 per ton of fresh grapes, we have a net result to the grower of \$12.00 place is well worth a visit, as showing what pollen, and so on; each variety, generally per ton for the grapes picked. If the same

pound, packed in cotton sacks, they will net the producer about the same price per ton for the grapes picked. By experience of observant growers, wine grapes the of Mission, Zinfandel and similar varieties lose in in drying about 314 to 1. Thus 1 ton of fresh grapes will make about 615 pounds of dried grapes, which at 21/4 cents per pound amount to \$15,37. The cost of drying in the sun, outside of picking will not exceed 12 cent per pound, say \$3.07 on 615 pounds. This leaves a net result of \$12.30 a ton to the producer. Dried grapes have been shipped largely to the East, where they sell against imported currants. One large California house handled 50 carloads last year and could have sold 100 carloads. Upon a basis of 21% cents per pound cost, dealers state that very large quantities can be sold. Grapes properly dried will keep indefinitely. Of the wine made every year no small percentage spoils and has to be distilled into brandy. For every reason therefore, it seems worth while for wine grape growers, who have not sure sale for their grapes at \$12.00 per ton picked, or their wine 15 cents per gallon under conditions above stated to dry their oranes. One hundred or two hundred carloads of dried grapes will make little im. pression upon the Eastern market. One hundred carloads will use 3,250 tons of fresh grapes, two hundred carloads will use 6.500 tons. In case of drying, let the grapes get fully ripe, with all the saccharine will develop, experienced hands laying them upon the ground when cut from the vine. Upon the ground they will dry, until the rainy season without turning, but the safer plan is to dry on trays, which permits stacking in case of rain, and rain is almost. a certainty before the whole crop is fit to. pick or can be dried. If dried upon trays, the raisins should be turned as soon as upper side is dried. Place an empty tray over a full one and reverse them; this turns the undried side up to the sun. When fully dried on both sides, they should be taken from the field whilst stems are dry and brittle, and run through a stemming machine and then through a fanning mill to blow out the stems. When cleaned pack into new white, cotton sacks. A few choice hunches are wanted in boxes as cheap raisins, but usually they will not pay for the extra cost, whilst there is a sure and quick market for the stemmed grapes .- Cal, Fruit Grower

A THRIFFY VINEYARD.

Messrs. Bigbee & Stover's vineyard and orehard on the newly opened hill road to Pleasanton, is one of the notably good plantings of Livermore Valley, and is moreover, worthy of note from the air of thrift which prevades it. The vineyard is somewhat cut up by two creeks, but the waste land along the bank is utilized for melous, and sunflowers; one small corner is planted solid in the latter; another somewhat larger is set in English walnuts, which are making a wonderful growth; a row of apple and cherry trees border one gulch, and a planting of tomatoes and potatoes another. yield an income. No weeds are allowed, and everything is thoroughly cultivated. The young vines, in the third and fourth leaf, are loaded with grapes; the peach orchard in the fourth year, is full-grown, and almost breaking down with fruit. This may be done with a grain-field in forty

CINTAGE AND AINIFICATION.

PLASTERING OF WINE AND MUST.

It is a very common practice in Spain, Portugal and the south of France, to add plaster of Paris to the grape purce in the process of wine making. The plaster is either thrown upon the grapes b fore they are crushed, or it is added after fermentation has commoned.

The reason generally given in favor of such addition of plaster of Paris is that the plaster, by uniting with some of the water of the grape juice, renders the remaining juice richer in sugar, and therefore more valuable. If such by really the intention the desired effect will not be obtained to any degree worth noticing, because even perfectly and anhydrous plaster of Paris unites with only a little more than one fourth its weight of water, while the gypsum thus formed takes up mechanically a con siderable quantity of liquor, and thereby greatly reduces the yield. In ord r to prov this, we have made the following experi ments:

The juice experimented upon was press d from grapes imported into the Lond or mar ket as Lisbon grapes, 45 oz of which yield ed 32 oz, of juice. Two ounces of juice log ing reserved for examination by its lf, th rest was divided into three quantities of 10 oz, each, to which were added 1, 2, and 5 oz, of plaster of Paris respectively, or 10, 20 and 50 per cent. The plaster of Paris was added in small quantities, well stirred into the juice, and allowed to remain in contact with it for twenty-four hours. The clear juice was then poured off the precipitate, and the latter placed upon a cloth and pressed, so as to obtain as much juice as possible. The portion to which 50 per cont had been added had unite solidified, so that no juice could be obtained without pressing. In this manner 9 oz., 8 oz., and 4.3 oz. of juice were recovered of the 10 taken in each case. The original juice and the three samples treated were then examined for sugar, free acid, and in two cases for tartaric acid and ash. The results are giver in the following tables, the figures showing the amount of substance present in gram mes in 1 litre of juice.

a give,	· ugaz.	lated as T
Onginal juice contained		
Juice treated with 10		
per cent plaster, 1811		
per cent recovered	135,35	1.57.0
Juice treated with 20		
per cent plaster, wit		
per ent recovered	1 105 two 11	38-35-3
Julee treated with 50		
per cent plaster, 13		
per cent recovered	151 51 "	0.66.0

Free acut cal-

It will be seen from these data that the addition of plaster increases the percentage of sugar but diminishes the amount of inice. Taking both effects into consideration, we arrive at the following calculation 137:58 crus

Amount of sugar in 1 litre ju ee ... 137-58 grid Amount of sugar in june recovered from 1 litre after the addition of 10 per ent plaster ... 125-14 ... Amount of sugar in june recovered from 1 litre after the addition of 20 per ent plaster ... 115-15 ... Amount of sugar in june recovered from 1 litre after the addition of 50 per ent plaster ... (60-15)

In the last case, therefore, more than half the sugar in the original purce had to be abandoned, in order to raise the percentage of the remainder from 13:75 to 15:45. The same effect neight have been produced by the addition of 2 per cent of sugar, or by the evaporation of 111 per cent of water. In the first case, 2 per cent more juice would have resulted, and in the second case a loss of only 11 1 per cent against 57 per cent loss by the use of place ter of Paris, for the same increase in the amount of suger, viz 2 per cent.

From the above we may conclude that plaster of Paris added to grape juice combines chemically with one-fourth of its weight of water, the gypsum so formed absorbing its own weight of juice, which cannot be recovered by pressing. Nor is this effect altered if the gypsum, be allowed to ferment with the must, the only differnce being that whereas in the first case the gypsum retains must in the latter case wine remains absorbed, the relative loss being as great as b fore.

Diminution of yield is, however, not the only drawback connected with the plastering of wine. The gypsum decomposes the turtrate of potassium present in the juice, insoluble tartrate of calcium being formed and sulphate of potassium going into solu tion. At the same time the carbonate of calcium, always present in larger or smaller quantities in plaster of Paris, precipitates the free tartaric acid. It neutralizes some of the other free acids of the inice and if present in sufficient quantity, it neutralizes them completely, in which case the phosphates of the juice will also be precipitated.

The addition of plaster of Paris therefore tends to the more or less complete removal of the tartaric acid, one of the most characteristic constituents of grape juice, leaving only free or combined malic acid, an acid which grapes have in common with all ther sour fruit. The place of cream of tartar is taken by sulphate of potassium, a salt having a perceptibly bitter taste, and acting as a purgative even in moderate

Moreover, as it appears that the amount of tartaric acid increases with the increasing ripeness of the grape, while the malic acid diminishes, the plastering virtually reduces the the mice of even the ripest grapes to a state of unripeness, at least as regards the nature of the acids. In the samples analyzed, as above, the tartaric acid present in the original juice amounted to 0,916 grms per litre, in the sample treated with 20 per c ut plaster it had been reduced to mult grm, the amount of malic acid remaining the same. The original mice yielded 1:085 gims, ash per litre, containing 2 415 grms. carbonate of potassium, while the sample treated with 20 per cent of plaster yielded 7:255 grms, ash, containing 0:005 grm carbonate of potassium.

The experiments made with price with which the plaster of Paris had been allowed to ferment completely confirm the results of the former analyses

As in Spain, Portugal and the south of France plaster of Paris is very generally added to the grap s, it has been presumed that this process must be of use, and we therefore think it musafe to draw the conclusion from our experiments which naturally suggests itself, viz. [That plastering is of mecessity only hurtful and disadvanta geons to the wine and to the producer. But this result of our analysis is unquestionable, namely, that the ordinarily stated object of the practice, viz. that it withdraws water and thereby effects a condensation of the must, is not the real object.

In some breweries plaster of Paris is employed for the procipitation of certain great simplicity, which is with his ker out alloummons matters which have a tendency to affect the beer man unfavorable manner, and in some sugar refineries it is used for ther changes.

A CHICK TO BELLEVOYING

The Livermore Head in a domesting editorially on the situation sies

The stand taken by the vinegrewers this valley, at the meeting held in Liver more last Satur lay afternoon, has caused a flood of editornal commont by the tresthroughout the State Other districts, toare becoming aroused and inquirus regarding the drying of grapes, and the probable market, are pouring into the office of the Viticultural Commission from every hand. Our action is generally commended The San Francisco Chronick says editors ally

The determination of the vinegrowers Alameda county to dry their grapes unless they can get a renumerative price from the wineries, is one which ought to be followed by other vineyardists. Such a plan, syst-matically carried out, would do much to free them from a system that has savored in past seasons of bulldozing.

The Bul-tin, in the course of an obtornal of nearly a column in bingth, in which the subject is ably handfed, discourses as fol-

The Livermore viticulturists have proposd a measure which is just now attract ng some at tention. It is simply the preposition of producers to fix their own prices, which, in this instance, only needs a uniform concurrence to render it effective

If the Liverm to viticulturists could bring all the other producers to their way of thinking, and could secure concert of action there would be no wine crops not shipping grapes sold for less than one cent a pound, delivered at the mearest depot or shipping point. That is a low price for choice grapes, and very fur below the figures quoted a few years ago. While it is true enough that the grape crop will be a very large one, in relation to California, it will be a comparatively small one in relation to the whole country. It is this broader view that is to be taken into consi bration touching the future prospects of the viticultural interest here.

The Oakland Tribum of Tuesday, under the caption, "The Lavermore Grape Growers," devotes a half-column to suggestions in behalf of the industry, and the solution now before us. It suggests resoperation and sweet wines as tollows.

If the grape growers of the valley will combine and organiz as a co-Sperative association, we do not think there would be any difficulty in securing the necessary capital to furnish the plant of a win-ry large on might to benefit their crops, especually if a distillery, as an adjunct to the manufacture of sweet wines of the Port and Angelica class s, be included. As a matter of fact more money has been made by Calitorms wine makers in the manufacture of sweet wines than in any other branch of the business. It is true that sweet wines, so called, are not rodly wine in the true sense, nor are they the kind on which we believe that the reputation of the Livermore district will eventually rest, that their manufacture is a very literative 10-10-55 disid to disregard as an almost to th general business of making light wites

As will readily be seen by the above analogous purposes. It remains to be seen Livermore and her vine district have be whether a similar object is attained by come important factors in the inclustrial life plastering in the case of wine. But even of this great State. In addition, her proin that case the practice would be rendered, ducers, is will also be seen, here the spin superfluous by the subsequent brandying pathy of the press and peops in their deof this wine, which puts a stop to all fur- mand for a living pure for their product In this valley, with its time quality and

for the prices realized last senson without a loss. The growers maintain, however, that wite making list s as in, provid v ry profit thee, and domaind a division of the profits. It would be ansard to ask, at the present tim , the price which grapes Is manded four voice igo, and which they are really and intrinsically worth, and world bring, were there gineral laws against a lufteration and the manufacture of sparious wines. The present I press I condition of the wine market, coupled with the increased toutinger of the coming crap, have depressed the pain of grapes, for the present, just as the mercias in the area of our alfalfa field depressed the price of pork a few years ago Park recovered, and so wid grap's and ame. But in the meantime, the mangura tion of other methods of using our crop, such as frying for Eistern consumption, will relieve the market, and give us better prices for the remainder, which goes to the winery. We believe, however, that the drying of or linary varieties of wine gripes is to become a permanent and paying industry in this State. The labor is a small item, while three cents a pound will give *2) at on for the grapes. Last season the Freshe people shipped two carloads East, n which they place it a not limit of three outs. They received three and a half, More were ordered but could not be sent. More were ordered but could not be sent, Other orders came, and finally an agent was sent out, to sleare more of these chenp and inferior raisins. They were found to be in great demand by the poorer people, for puddings, and the like, where they can scare by by told from a Li-sno Muscat raisin. J. H. Wheeler, Chi i Executive Officer of the State Vita ultural Commission, has writt n to prominent N w York houses, asking regarding the demand for these dried grapes, and the universal reply is that all that we can produce can be sold in that city for five conts a pound. Considering this report, we can see no reason why a very large proportion of our grape crop in this valley should not be devoted to this use this wason, irrespective for prices for wine making. No outlay is necessary for buildings or ev n trays, the hare earth being the best place on which to cure the bunches. The shrinkage is two-thirds, and the product, unless the berry be very small, a sweet fairly palatable raisin.

light crops, it is impossible to raise graps a

Payorite Revenues

Chart ap and chanpagn caps are tashionable beveriges for reciptions and ball suppors and are usually provided for g attemen at garden parties. They may to propared by the following recip s

To svery bottle of claret anow one of sola-water and one of himemobili or half a sigher , half a wine glass of brandy and a dessert spoonful of Maraschine, sweeten totaste, and if progurable, just in a sprig of borage and a lat of cheamber rind, allowing them, to remain in about a quarter of an hour. A spring of mint bust passed through one or twice is in in provement. I'm champagre up down to each bottle no it soitz r had a wine glass of brandy, a lessert speciaful of caro as and sugar to test , still well tog ther with a large specia and pour ait og ess jugs, and have in a od place till near supper time. Ha warm souther put a lump of it in such jug a few minutes before required.

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THE VINE AND HS CRUIT

continued from page 124

In continuation of the subject in the Vineyardist, Dr. J. H. M'Carty says

In Egypt the vine must have received attention at a very early period. Usiris, the Jupiter of the Egyptians, was held to be the first vineyardist. As a god he was worshiped throughout all Egypt at least 1800 years B. C. There are many bas-reliefs and sculptures on the coins and monnments of that ancient nation which prove that the vine was cultivated and wine made from the juice of the grape. This also is shown in that thrilling and beautiful story of the captive Joseph, recorded in the book of Genesis, who in prison interpreted the dream of the king's chief butler. It brings and in use in that day.

"And they said unto him, We have dreamed a dream, and there is no interpretation of it. And Joseph said unto them, Do not interpretations belong to God? tell me then, I pray you.

"And the chief butler told his dream to Joseph, and said unto him, In my dream, behold, a vine was before me;

"And in the vine were three branches: and it was as though it budded, and her blossoms shot forth; and the clusters thereof brought forth ripe grapes:

"And Pharaoh's cup was in my hand: and I took the grapes, and pressed them into Pharaoh's cup, and I gave the cup nuto Pharaoh's hand."

The custom of expressing the juice into a drinking cap for immediate use is here incidently shown. This was one of the regular duties of the king's cup bearers in ancient times. The custom should be revived, and is, we believe, in New York at this time. Let us have restaurants where grape juice can be had "on call," expressed in one's presence, and flavored to suit the taste. When the Israelites were on their way to the " Promised Land" they grew very impatient at times. They were anxious to be free men and to possess the "goodly land," where it was said there were "vineyards which they did not plant." showing that even the old Canaanites culti vated grapes; but they did not like the long marches and daily privations which the exodus involved. They were human. Most of us are anxious to have the "good things" of this world, but are not so willing to endure the hardships. We forget that out of the toil and struggle of life comes its best blessings and greatest victories. So they complained. Hear them chiding Moses-

"And why have ye brought up the congregation of the Lord into this wilderness that we and our cattle should die: And wherefore have ye made us to come up out Egypt, to bring us to this evil place? it is no place of seed, or of figs, or of vines, or of poin-granates; neither is there any water to drink.

There were vines in the land in which they were going, but they did not know it. This shows that they knew about the vine and loved its fruit, for they longed for the land they had left.

The vine is supposed to have come into very early use, if not the earliest, in the hill country south-east of the Caspian sea, which lies between Asia and Europe, and there, as in Palestine, and in fact wherever it has has been most successfully cultivated, it has been grown to best advantage on sloping grounds and even on rugged billsides. And frequently in soils thin and poor, so

The vine thrives best in a day soil. The hillside is generally drained naturaly. "Nothing," says the writer, "can be more suitable to situations where patches of good soil are mingled with bare rocks, nor anything more beautiful than the rocks covered branches were supported by an arbor 114 the long and cold winter requires the use of with luxurant folings and rich fruit." This mode of cultivation on steep, rocky slopes was anciently very prevalent in Judea.

But wherever the vine was indigenous, one thing is certain-it has conquered the world, for it is a great traveler. It found its way to Assyria, India, China, Italy, France, Germany, America and everywhere In America, the wild grapes—the vitis La brasea, vitis Robinstifolia, vitis Valpina, etc., doubtless have come in some way from the original source of the vine. It to light the fact that grapes were grown was known in Italy and Gaul 600 years B. .. where it is supposed to have been introduced by the Phoco-ans In Italy the cultivation of the vine, owing to the bibulous propensities of the Romans, was carried to a great extent. Indeed historians, especially Virgil and Columella, have given accounts of the popular love of wine especially among the rich. It was so universal and ardent that more important productions of the soil were neglected, on account of which one of the emperors, as early as A. D. 81. r stricted the cultivation of the grape by royal decree. The vine came into the south of Germany about 300 years n. c., and there were vineyards on the Rhine in the days of the Emperor Probus, A. D. 281. Charles the Great, it is said, derived a large amount of revenue from the vineyards in his empire. The Romans brought the vine into Eugland about the beginning of the Christian era, though it has never thrived well in the British Isles, the climate being too moist and cool. Still, grapes have been grown in England to some extent. At Welbrek it is said a bunch of grapes was produced and sent a sa present from the Duke of Rutland to the Maronis of Rockingham which weighed nineteen pounds. It was conveyed to its destination, over twenty miles, on a staff by four men, two of whom bore it in rotation. The greatest diameter of this cluster was nineteen inches and a half, and its length twenty-three inches Then there was a celebrated vine at Hampton Court, the old place of Henry VIII. It was planted in 1769, is a Black Hamburg, and is the largest grape vine in Europe if not in the world, according to popular belief. In the autumn it almost drags down down the house or arbor over which it climbs. It has been known to yield 2,500 bunches of a pound each on the average. The Queen, whose property this is, preserves these grapes for her own table. principal stem of this celebrated vine is about thirty inches in circumference near the ground, and is over 110 feet in length Were it not cut back annually, there is no telling where it would lead to. Its branches now cover 2,200 square feet. We spent a day in 1881, at Hampton Court It was too early in the season for Hamburg grapes, besides Victoria did not tell us to thelp ourself."

We cannot afford to be outdone by England Hittel interms us in his "Resources of California," that in 1765, (which was four years before the planting of the great Hampton Court vine above alluded to), Schora Dominguez, a native of Mexico, and a resident of Santa Barbara county, California, rode from Menterey to her home and before starting she picked up a grape cutting for a switch. When she had ridden as to be quite useless for other purposes. I twenty miles, she saw that her switch was

budding. So she took care of it, and after getting to her house at Montecito planted it in the garden. The switch grew, and at the date when the account was published, its diameter was sixteen inches. Its teet long and 78 feet wide, while its annual vield was three or four tons.

There is a grape vine at Glenora, on Seneca Lake, which the writer saw last summer, of great proportions. Its arms extended fifty feet each way from the central stem, and yielded, in 1888, about 500 pounds of fruit. It is the property of Mr. Jam S Piche.

COST OF LIVING IN CALIFORNIA.

The cost of living is a prime factor in the growth and prosperity of a State. This utom is one of the first to be taken into consideration by the intending immigrant, and nothing is easier than to prove the fact that, in California, a family can live better, and cheaper than in any other part of the world.

The Red Bluff Sentinel in a recent issue, taking a remark of Hon. M. M. Estee as a text, demonstrates the truth of the statement as follows:

"A family in California," said Mr. Estee to the State Board of Trade the other day. may live fully 33 , per cent cheaper than in any of the Eastern States.'

"This statement, if true, is a most important one to get before the minds of peo ple who live cast of the Mississippi, and who are looking longingly toward California as their future home. If such can be assur ed that it costs less to live here comfortably than it does where they now are, they will be very apt to hasten the date of their coming to our State.

Let us look a little into the truth of Mr. Estee's remark. The best way to compare the cost of living here and there is to take those articles the buying and the use of which make up the aggregate cost of comfortable existence. Such are the staples or necessaries of life. Begin with flour, for instance. Flour is quoted in the San Francisco markets at \$3,90 to \$4 per barrel. The same quality is quoted in the New York market at \$4,60 to \$5 per barrel; in the Rochester market at \$4.50 to \$4.75 and in the Buffalo market \$4.75 to \$5.25 per barrel. These figures bear out Mr. Estee's statement so far as the great staple of flour is concerned.

Take another article of daily consumption, viz, meat. The San Francisco market reports show the following prices of fresh ment, for one day recently: Bef, \$5 to \$5.50 per ewt: matten, \$6; veal \$5 to \$7; lamb, \$8. On the same date the New York State markets gave the following quotations: Beef, \$7.50; veal, \$9.50; lamb, \$11, and mutton \$8,50 per cwt. Here again the ratio of cost in favor of California by about one-third.

Another great commodity rapidly becoming a necessity is fruit. In this article throughout all its forms California has a large advantage over the Eastern States. and while we have not at hand the list of prices to show the exact amount of differonce, we are safe in saving that the ratio is in our favor by even more than the onethird of the foregoing statement. It is surprising how far the single article of fruit goes to supply the daily table of the California family and during how much of the year it is to be here seen in use as a common article of diet.

There are, of course, some articles of

which the Eastern prices are lower than our own. The two principal ones are clothing and fuel, and in these the advantage is more apparent than real. Wood and coal cost much less East than here, but so much of both as to bring the ratio back to not far from equality. So, too, of clothing, although Eastern dealers can, and do, sell some articles below our figures, the greater varieties of weather and extr mea of heat and cold require such an increased expenditure for each family as to equalize the actual cost of clothing for the whole year round.

It is impossible in a single article to extend this inquiry through the whole line of articles of daily consumption. The above examples will suffice to show that Mr. Estee had much ground for his remark. There is another source also from which it may be verified. In 1879, when Mr. Evarts was Secretary of State, he caused to be sent out to all the consular stations of the United States a series of questions as to labor, wages and the cost of living at the various points. The answers to his inquiry he cansed to be published in pamphlet form. together with a brief compilation of their statistics, prepared by himself. From this official source it appeared that the prices of necessaries in San Francisco was one-third less on an average than anywhere else in the world. It is to be presumed that the comparative cost of living has not much changed its ratio in the last seven years."

INTERNAL REVENUE DECISIONS

The following is a synopsis of sundry decisions rendered lately by the Treasury department in relation to wine and oil:

Champague when imported in large bottles called "magnums," holding about two quarts each, there being six magnums in a case, and two cases securely bound tog. ther with iron bands so as to form a single package, is not liable to seizure under the provisions in Schedule A (T. I. 810), it be. ing held that said combined packages, which contain one dozen of the said magnum botiles, constitute a substantial compliance with such provision of the statute.

Tiu cans containing olive oil, which are barrel shaped and corrugated horizontally to give the appearance and more than the strength of hoops, and are furnished with independent screw fancets for the withdrawal of their contents, and with a screwclosed aperture at the top through which they are originally filled and can be refilled with oil or liquid of any kind after their contents have been removed, are held to be dutiable at the rate of 100 per cent. ad valorem, under provision in Section 7 of the Act of March 3, 1883, the articles being coverings which are intended for use otherwise than in the bona fide transportation of the goods to the United States.

CORRECT

THE Templeton Times very correctly says: "With all its natural wealth and advantages, California owes a great deal more than is acknowledged of its present and prospective prosperity to the faithful, efficient and generally inadequately compensated work of its newspapers. Week by week, and day by day, the press has pounded away at human ignorance and credulity until the resources of the State are beginning-and only beginning-to be understood by our own people and by those of other States."

Falley says

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VINE GROWING IN VIRGINIA

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WINES.

BY TOHANN CARL LET CHS.

Since unadulterated wines are made from grapes, it will be here not superfluous to enumerate the constituent parts of the latter. They contain, besides water, tartarie acid, saccharine matter, gum and other slimy substances, wax, tannic acid. albumen, resinous coloring matter, fibrin, odoriferous matter, coloring matter, astringent substance, tartar, sulphate of potash: chloride, sulphide, phosphate, and citrate of calcium; and more or less impurities adhering to the surface, such as particles of the soil and the like. Of these ingredients, the acids, the slimy substances, and the astringent matters are chiefly found in the green grapes, but disappear more or less with their progressive ripening, being by the working of nature transmuted into sugar. These enter also into the must, but to a great part separated during the fermentation, viz., the fibrin, the way, some coloring matter, a part of the albumen, the resinous matter and slimy substances, with the earthy and other im purities, which settle as lees on the hottom of the barrel, together with the tartar, a part of which incrusts also the sides of the

- 1. Water constitutes the principal part of wine, for the best ones contain at least sixty per cent. of it, the poorer wines eighty and even ninety per cent. The grapes will be more watery, and consequently the wine more weak, in wet years; or if they grow in a moist soil; or if rains predominate shortly before or during the vintage.
- 2. Tartaric acid is found in the stems in the tendrils, and in the green grapes themseives-partly free, and partly combined with potash.
- 3. The saccharine substance is formed by the ripening of the grapes, and this takes place the more successfully the more the grapes enjoy the heating influence of the sun. The saccharine matter is decominto alcohol.
- 4. The gum and other slimy matters are not injurious to the wine except by impeding the clarifying process.
- 5. Wax and resinous coloring matter are found in the busks of the grapes.
- 6. Tannic acid and other astringent matters give to the red wines a tart and harsh taste if fermented too long upon the
- 7. The albumen found is only in a moderate quantity in the grapes, and settles easy with the lees,
- 8. The odoriferous substance is in some kinds of grapes more copious, for instance, in the Riesling and in the Muscats; and if these are mixed in a certain proportion with the others less odoriferous, a fine bouquet is imparted to the whole mass.
- 9. The coloring matter has its place on the inner side of the husk, from which it is disengaged during fermentation; therefore the longer the red wine is left in the fermenting-tub on the husks, the deeper will become its color.
- 10. Most of the above-mentioned neutral salts will also settle with the lees, and partly crystallize out of the wine the older it becomes.

HUNGARIAN WINES.

1. We will here mention the most celebrated wines of Hungary. The first is the world-renowned Tokay. Of this there are

table wine. Of the sweet wines the first is the "Essence" which is collected in vessels put under baskets containing the halfdried grapes (Trokenberre), the juice of which drops by its own weight partly out. The second quality is the so-called "Ausbruch," made in the following way: when the above grapes do not yield more "Essence," they are taken out from the baskets and put into some flat vessel, and there, by treading, converted into a pulpy mass, which is then transferred into an open barrell, and the proper quantity of good must added (to eighty measures of the pulp, one hundred and fifteen measures of must), and well stirred up. As soon as the mass is fermenting the whole is again well stirred, and then put into a loose sack and soneezed out, then filled into clean barrels to finish the fermentation. The third quality is called Maszlas (pronounced Maslash). made from the squeezed pulp in the abovespecified way. The fourth kind is made from the white grapes in the common way. 2. The wine of "Ménes" (Menesh) is

- also a sweet wine, not much inferior to the Tokay, but red in color, while the Tokay is vellow. There the blue grapes are handled in the same way as the white ones are for the Tokay.
- 3. The wines of Sirmia. The sweet wines of this province, as well as the others are also of eminent quality, though they are sold mostly under the name of Karlo vizian wines; those of other places in this district are entitled to no less credit for their excellent virtues, as, for instance, those of Illok, Suseg, Cheslevitz, Beoscin, Rakovatz, Kamenitz and Peterwardein The red Sirmian wine is sweet, very aromatic, dark red, and mild. The white wine is too spirituous to be drank by itself, and is used to improve poorer wines. Besides those wines they prepare the so-called "Dropwermuth," named from the process for collecting it from linen filters, which, being suspended in a very heated room, the must falls from the filters in drops into the vessels beneath. This half-fermented must posed by the fermentation and transmuted remains in small casks for several months sweet, and has some similarity to the Champagne. Another kind of wine there manufactured is the so-called "Rasciao Wermuth," The barrels are nearly filled with half-dry blue grapes, without stems, and then a good old red wine is poured over them with some wormwood and
 - 4. The wines of Buda (Ofen) are also celebrated for their fine qualities-especially the red ones of Buda and its environs, and the white ones of Pesth, in the same county-and called "Steinbrucher."
 - 5. The wines of St. Endree are also very fine, agreeable to drink, spiritnous. and aromatic. Here are also sweet wines made from dry grapes.
 - 6. Sekzardy wines may successfully compete with the best Burgundy.
 - 7. Pétshy (Funfkirchen) produces good table wines, all of white grapes.
 - 8. Villanver wines remain sweet even when many years old.
 - 9. Neszmély farnishes one of the best table wines known, the peculiar aromatic taste of which can not be found in any other wine. It attains its maturity in from three to four years. It is a pity that the spots where these magnificent grapes grow are so limited in circuit. The average product of this wine amounts yearly only to ten thousand barrels, a gallon of which sells commonly for from fifty-five to sixty

10. A rival to the Neszmely is another white wine, namely, that of Shomlo, Some even prefer its aromatic taste to that of the Neszmély, though quite of another bouquet. and many consider it the best wine for the

be bought in Hungary for four to five cents.

table. Its grapes grow upon a basaltic hill of limited size; the average yearly product is about 25,000 barrels.

11. Rust and Edenburg have also excellent sweet dessert wines, well flavored and spirituous.

12. Besides many others of first-rate quality too numerous to mention, there are also of prominent notoricty the wines of Visonta, Erlan, Presburg, Ratchdorf, St. George Posing, Moderu, Gruan, Limbach, Tyrling, Shenkvitz, Dneova, Nusdorf, Neustadt, etc.

13. Among the wines of Croatia is the Moslavina, equal to the Burgundy; the Babulek and Bukovetz, the most prominent for their rich aromatic savor and strength

14. The win s of Bunnt, in Lower Hungary, are also generally, on account of the warm climate, very spirituous, miland spicy. The best of them is furnished by Vershitz, near the Turkish boundary and Weiskirchen.

To give a slight insight into the enormous wine production of Hungary, I will her mention only a few iostances: Promontory a single bill, 55,000 barrels a year; Teteny a village, 65,000 barrels yearly; St. Andree, a village, 70,000 barrels; Ménesh, 470,000 barrels; Pétsh, a town of considerable extent, 500,000 barrels; Tolna County, 700,000 barrels. In this county the village of Seskard alone averages yearly 250,000 barrels, and the county of Pest 255,000 barrels. Hungary may be therefore rightly classed among the first vine-growing cont. tries, her wine produce being neither in quality nor quantity second to any other country upon the globe. Francis Shams, in his c lebrated work estimates the yearly average yield at 30,000 barrels. One thirtysecond part of the cultivated lands in Hungary is planted with grape vines.

THE RHINE WINES.

Both banks of the Rhine, from its outlet. several hundred miles in circumference, up to the city of Bonn, display to the eye, with but little interruption, their innumerable vineyards. All the wines which are made in these districts should properly be called Rheinwines; but, for the purpose of each particular wine being the more easily distinguished from that of any other, the name of the particular district where each kind is produced is commonly adopted as the title of the wine, namely, Elsasser, Seawine, Marggraffer, Aarblischer, Zaardtwine, and Naahwine.

Those wines only which are called "Rheingans," and those made in the vicinity of Mayence and on the left bank of the river, are by custom designated by the name of "Rheinwines;" and, indeed, these sorts are emineutly entitled to this mark of distinction, as they possess, more than any of the others, those peculiar qualities which distinguish the Rhine wines. After a few hours' travel fron Mayence on the right bank of the River Rhine, you begin to enter upon the more favorable regions for the culture of the vine-the so-called "Rheingau." Here the most celebrated wice districts are the following: Asmannhausen, Rudesheim, Geiseoheim, Johannisberg, Markobrunn, Steinberg, and Hockheim, which lies toward the east.

Next in quality to the wines produced in four kinds—three sweet, and one so-called cents, while other common table wines can these districts you may class with perfect those of Rothenberg; next, Geisenheim;

certainty those made on the left bank of the river; e.g., those of Schulachler, Ingelheim, Laubenheim, Bodenheim, and Nierstein, all of which places are in the vicinity of Mayence, and whose wines are not unfrequently found to give satisfaction even to the ablest connoisseurs; for, even if the string ncy and spiciness of the first-named class of wines can not be attain 1 by these other kinds, yet these districts have afforded wines, which by their sweetness, bouquet, and strength, have obtained for them a considerable degree of public estimation.

The vineyards also toward the south and southwest afford unexceptional wines. Nature, however, has not provided in every part of this wine-country a soil so cong uial to the culture of the grape as she has in the Rheingau. There the soil attains its highest perfection for the production of choice wines: there flourish the richest vineyard . which produce the most generous wine, the vines themselves growing generally in stony ground or in the chifts of rocks. On he southerly side of these tracts the sun shipes the whole day long; its rays warm he stones to the greatest intensity, and, by he radiation of heat ther from, the grape s ripened by the solar influence to an equal perfection with those which are fully exposed to the direct blaze of the supheams. \ high d gree of vinous essence is consemently developed in these grapes-an e'ement which would be sought for in vain in any other part of the Rhine. The fact is announced to you from a distance by the smell of the air, which is impregnated with the sweetness and spicy odors arising from the vineyards. Besides the districts above ennmerated, whose vintages take the preeminence of all others in the Rheingau, there are many other places which, in a greater or less degree, are suited to the growing of vines of various varieties.

All the wine districts on the Rheingau, with the exception of the Burgundy vines, from Asmannhausen, produce only white wines. Opposite the Rheingau, on the left bank of the river, red wines are produced also, as at lugelheim and Lorch, near Mayence, and several other places. latter place, like the Asmannhausen, in the Rheingau, affords Burgundies of superior strength and piquancy, but never excels in sweetness or purity. The finest Rhine wine comes indubitably from the mountainous regions of Rudesheim and Hinterhaus. The variety of grape cultivated in these monotain sites is called the Orleans or Harthengst; these differ from all the native grapes of the Rhine. They are very large io size and exceedingly aromatic, and in favorable seasons they become extremely sweet. This accounts amply for the fact that, in the year 1822, four thousand Rhenish floring were paid for one pipe (about 280 gallous) of Rudesheimer wineabout \$14 28 per gallon. In the year 1815 1200 such pipes were raised in Rudesheim, and 1400 pipes in the year 1819. This wine is appreciated for its strength and pleasant flavor. It differs from the mountain wines made from the Orleans grape, of which the average yearly product is fully 150 pipes. The Oberfelder and Kiesling grape also produce from 400 to 500 pipes, and Hinterhaus yields annually Irom 10 to 12 pipes. In the year 1809, the price of a pipe of these wines was 3,000 Rhenish florins in Rudesheim: in 1800, 1800 florins; in 1804, 750 to 900 florins.

Almost equally esteemed are, first, the wines of Steinberg and Johannislerg; next,

'ourthly, those of Markobrunn and Grafenberg, near Kiederick. All these wines are produced from a grape called the Riesling. This grape is inferior to none in bouquet, fineness and sweetn'ss. One pipe of the Steinberg vintage was, in the year 1822, sold for the sum of 5,000 floring (\$7 14 the gallon). The vincyard belongs to the estate of the Duke of Nassau. All these wines have, as we mentioned before, obtained, for their remarkable spiciness and odor their examisite flavor and parmen ey, no especial public preference, so that the wine-growers will readily make an out lay of thousands of dollars in a vineyard of this description.

The best fruit for the production of the wine is grown in the upper regions of the mountains, where it is protected by the chatean. The next in quality of this winvis produced from the grapes cultivated in The central parts of the mountain heights The most inferior kinds are produced from wineyards at their base. The soil consists of slate.

During the process of the vinous fermentation, the bane-hole of the cask is covered with a patch of paper, upon which is placed a brick. After the fermentation has ceased. the barrel is replemshed, and a bring with a valve is put on, so that, in case of a second fermentation occurring, the carbonic acid gas evolved by that process can readily escape

During the first year the wine is drawn off three times; in the course of the second year ouce or twice, so as to clarify it sufficiently, and it is only after a period of Your or five years that the wine becomes sufficiently ripened for the final operation of bottling off, after which it can be kent for a period of twenty-five years or even more. To prevent any sediment, the wine has, in the first place, to be cleared. When the wine is drawn off, it is pumped into troughs, which conduct the stream till it flows into the bung-hole of the cask, by which process the whole volume of wine becomes more thoroughly mixed,

Here the wine is never carried in buckets or poured from them into the learnels. because, by exposure to the atmosphere, wines made from the pure of rotten grapes would be turned into a brown color, which discolaration although it will cartially disappear in time, yet the body of the wine itself will, notwithstanding, be always of a darker that than usual.

During the first, second, and third years the valve-hungs are affixed to the wine barrels. These are shaped like an ordinary bing, but they have a small perforation through the center, which is closed up by the insertion of a cork, adjusted by a steel spring, which apparatus affords a free escape for any evolution of gas,

On the 17th, 18th, 19th and 20th days of October, 1831, the work of picking the grapes began, continuing from noon until 4 P.M. On the southerly sites, where the grapes had become rotten ripe, the gathering of the balance was commenced on the 27th, 28th, 29th and 30th of the same month, and was continued until the 5th of the following November, when the picking was finished. On the 27th and 28th the two hest vineyards were selected, and their choice fruit picked separate and kept apart from the rest. This work, although slow in being performed, paid for itself well, for, after fermentation, the must remained as thick as Malaga, and before the process is of making the wine were completed, it sold for no less than 10,000 guilders the pipe, or \$11.28 the gallon

the annual produce of which is 25 paper each pipe contains 1500 bottles, worth 21, 000 florins. An the year 1818 they raised 47, and in 1819, 52 pipes of wine.

This wine contains a large perpertion of spirit, and is very polarable. It ranks in quality with the lest wines extint. It is made from the Rushing grape. Plu Si grapes are left to apon thoroughly, and not until the wine is a year old, is it drawn

The following years have produced good vintages: 1791, 1802, 1801, 1811 and 1822 In 1819 the price per bottle of first class wine was four flams, of a cond class three and of third class one and a half. At Hockheim come hom's tide from Mayence the grow on an elevated table land, which verges toward the main, and covers an area of 1200 morgens. Its site is exposed fully to the snu, but has little protection from the north winds, and it is, therefore, to the vicinity of the river that this wine owes its excellence.

The price of one more nota little over half an acre) of vineyard near Mayenze is 2000 florins; toward the center of the heights, 1000; and on the tops, 500 florins The most preferable locality has in the direction of the Dechanci and the choicest spot there, is what is called the "Church Piece." It has contiguous to the church itself, which probably shelters it from the northerly winds on one side, and rediates the light and heat of the south rly sun on the other.

In good seasons a barrel of Rhenish wine realizes the sum of 5000 florins.

Here the owners of extensive vineyardpick their grapes as soon as they begin to rot and the gathering of such clusters as are not found in this condition is deferred to a later period, till it arrives. The boris must be of a light-brown color and opaque, not green and transparent, the kernelbrown and not white, the fruit itself of a sunburnt and swort taste to the pulate; the vine-stem must be in a dry and supless state.

The curie bunches of the Bicsline graps are deposited in a treading tank. and are emished by the feet of the laborers. By this operation the boughet (which originates from the part of the muci side of the busk) will be easier extracted, and the wine much more flavored, still more so if the must thus camed remains undisturbed for twenty-four hours. After this interval, the husks are thrown into the ordinary wine press. The fermenting process is carried on in the barrel, the lunghole of which is covered either with a vinc haf or an inverted bung. The bungs used for this purpose are cight or nine inches long, which are plunged to half their length in the wine. By this means the brings are constantly soaked by the wine, which causes them to swell and fit better to the vent of the barrels.

In Edfeld, the largest town in the Rheingau, situated close upon the River Rhine, the vintagers pack the rotting grapes

The crushing of the berry is seldom per formed by the wine mill, but, for the mos part, is done in the tread-tub, as the bou quet is by that means more readily extracted. The rress is generally used, however immediately after the treading by the foot. grapes an interval of twenty-four hours is

The Cass Lyineyard contains 63 morgens | mentation is carried on in separate barrels which are hermstreally scaled by water It is not considered that the wine itself a benefited by this mode of treatment, but it is indopted eather for the sake of a curity to the work-people, as it prevents the scape of the carbonic acid gas into the vinits where they are employed.

Stemberg a quarter of an hour from the convent of Eberbach - produces, by itskillful management, on excellent knelse wine. It yielded in the year 1819 eighty four times. Here the grates are gathereas late in the season as possible, and they are never chaired off from the vines at ones, but in two or three different pickings, is they become fit for use. The work is done here two or three weeks later than in the Blainner and care taken mayer to gather the fruit while there is any dew on it. If re also the grapes are crushed by the feet, and the grinding-neills are ne more in use. In a season of failure, the fruit is put through the press as soon as it is brought in from the field; but in good seasons it has for twelve or eighteen hours before it is pressed, so that the saecharine matter may become fully developed. Sereicating the larges from the stems, which was formerly done, is now dispensed with, as of no account and expensive; for the stems at so late a vintage are too dry to impair the quality of the wine.

The red wines of Asmannhausen, in the Rheingau, are also of a very valuable description. In strength they excel all others made on the Rhine, not excepting even Burgundy itself. They possess a peculiar speciness which is rarely met with. The narrow limits of this tract, however, permit the cultivation of but few vineyards

The preparation of the wine, as practiced in the Duke's cellars at Rudeshiem, is as follows. The grapes are pounded together with a mist club, and then conveyed to Rudesheim; there they are thrown or masse into a square trough with a flat bottom of wire gauze, underneath which is another vessel into which the berries are swept with a stiff besom, passing through the wire sieve, and falling into the vessel beneath. After this operation, they are mushed together with wooden pounders until the whole is pounded into a pulpy mass

The fermenting of red wines is conducted thus. Tubs are placed vertically, in which a fancet is inserted at the lower edge, over this hole a perforated little board or tin is mailed, to prevent the husks from entering the fauct and obstructing the passage of the wine. Thus the wine will run freely through the fancet without Leing clogged up by the pulp of the grapes. Into these tubs, thus titted up, the conglomerated mass of mashed grapes is put so far as to fill them up to within a quarter part of the top. Then a cover, perforated with small holes, is fastened with some three or four props over the mass, so that, when the same commences to ferm at, and consepero trate through those small holes, of prices. There is a large demand for grapes vent the atmospheric air from mixing with who make from them a cheap wine. More and souring the busks, which, on their fresh grapes will be used if offered at taken, a well-fitting cover is inserted and grapes. Many years ago when grapes litted air tight. Into this cover a curved were low, growers found an important outwhen the fruit is very tipe; but in less ripe tim or glass pipe is inserted, the upper and bit by this means. The syrup was sold for of which is put into a small viscol filled domestic use in this and kegs. This prosuffered to clapse before the mechanical with cold wat r. The water will absorb duct is used in large quantities to sweeten pressing operation is performed. The fer- the earbounc and gas, so deleterious to perfs, sherries, angelies, see

bunuan life, but the water becoming saturated with the gas, must be renewed daily. Thus the whole is left until the fermentaion is complete, which commonly will take plan within three weeks. After this he fluid part is decided through the fauto the cover, together with the perforated s and, is removed, and the busks properly pressed, each kind of the junces being all d by itself into barrels, the former eaking a wine of the first quality, while the press wing is of on inferior grade. Red. Times on commently drawn off in the March Siltowing the vintage, and sold in tour or six weeks after. What stock remains on hand is drawn off again in the following October

It is to be remarked that hy an excellent arrangement, the must wine can be conveyed by hollow tubes directly from the press house to each cask in the cellar. The incthod above described, is the best that can be adouted for the making of red wine All other modes are attended with the disadvantage of a too long exposure of the must to the open air, which gives it an acidity. The above process totally obviates such a tendency, as all contact with the atmosphere is excluded by the water. The red wines of Digelheim, though lighter in quality, nevertheless keep better than those of Asmanuhanson. They raise a good deal of wine here—one olon fetches from five to six caroline, whereas the gennine Asmannhousen costs at least ten carolins.

THE VINTAGE.

A circular has just been issued by the Viticultural Commission suggesting a plan to increase the price of wine grapes by with holding a part of the crop from sale for wine making and depositing of the rest for other purposes. The circular concludes as follows

To the producer of grapes there comes no penalty with the proposed plan, for at the low prices now promised for grapes, there is little difficulty in disposing of the I moseld half eron by other means, amorawhich are the following: (1) drying, (2) distilling, 3) vinegar-making, (1) selling fresh to local markets, (5) boiling into cheap symp for domestic use or sale.

By proper management divid grapes will not \$20 a ton, and the demand is growing. For distilling, \$7 to \$10 can be realized, which prices, when prices from the other hulf are considered, would make the growers come out about even. Spoiled white wine, sold for vinegar last year at 14 cents a gallon, and more was desired than could be had. Nearly all red grapes may be used for wine vinegar if pressed without fermenting, and a white wine obtained, the only kind desired for vinegar. This will burneg the grower \$12 a ton. Where known to be pure, wine vinegar, at retail, brings from 25 to 50 cents a gallon. Local markets will take large quantities, if properly managed. Fresh grapes, quently rises, nothing but the carbonic shipped in bulk to San Francisco or large celd gas and the fluid part of the mass can towns, have usually realized satisfactory which the former two will virtually pre, in bulk from Italians of San Francisco, part, would communicate this sourcess to growers prices. A healthful syrup may be the wine. After the above precaution is obtained by boiling the juice or must of



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A LCOHOL I

Among the curious side issues of the corrent tempereance discussion, says Professor Atwater in the Century, is the question whether alcohol is a natural product. This is, I believe, vigorously denied in some quarters. Alcohol, like bread, is manufactured artificially from a natural product. In each case fermentation, a natural process, is made use of. But while bread is known only as a product of manufacture, alcohol appears to be very widely distributed in nature, though in extremely minute quantities. Nor is this at all surprising. If grapes or apples, or their juice, be exposed to the air, fermentation sets in, and the sugar and other carbohydrates are changed to alcohol. The ferments which cause the change, are affoat in the air all about, and might not unnaturally attract similar compounds in other vegetable substances. Professor Muntz, of the National Agronomie Institute, in Paris, has, by refined chemical tests, discovered evidences of alcohol in cultivated soils, in rain water, in sea and river water, and in the atmosphere. He finds that vegetable moulds may contain considerable quantities, and it appears probable that the alcohol "originates in the soil, from the fermentation of the organic matters in it, and is thence diffused as vapor in the atmosphere." Another side issue of our temperance discussion is the so-called "Bible wine" theory, which maintains that the wine used in Palestine in the time of Christ, was not alcoholic. I have been unable to find evidence that the composition of the juice of the grape, the laws of fermentation, or the practice in the making and using of time from those in other countries, or in that country at other times; and believe it safe to say that the theory that Bible wine was different from other wine, that it had not the alcohol which other wines contain, opinion of the student of science.

THE TROUBLES between graps growers and wine merchant are culminating in a latest r ports from foreign vineyards: determination upon the part of the former that no longer will a condition of affairs tantamount to beggary be tolerated in sacra- factory manner, a fine sunshine hastening ficing the producer in an interminable contest over who can sell. California, wines the cheapest. It is on this point that the whole question hinges. A constant war over prices has been going on for years among a certain class of dealers, with the result that to-day our wines are selling at a rate, simply ruinous to all concerned in the

The talk about boycotting is all humbug and only amounts to an agreement entered into between a few of the wine sellers to refrain from purchasing from the independentgrower who is selling his wine on this market. It is not a general combination against the producer. The low prices to which the market has been forced has in itself compelled the wine man to buy where he can find the cheapest offer. The consequence is that the unfortunate producer is forced into a corner, and the dealer is doing a business which must eventually end in ruining himself, as he is the reputation of our wines.

The matter has now come to a point, where the grower is forced in his own protection to take some decided action. The movement has commenced in the varions wine growing districts, and it will be kept up until the market price of wines is forced, by a short supply, up to the higher figures it should command from a standard of excellence, and to a rate which means a profit for the producer.

This is as it should be. Our wines are not such a drug on the market at home and abroad as to warrant the absurd pricesas low at times as nine cents per gallonat which they have lately sold. The demand is growing in the Eastern States and abroad at a rate which should make the comparatively small supply worth fully fifty cents per gallon. The wine men should remember that in depreciating the value of their goods, they are not only injuring the grape grower but also their own business. Competition in the trade carried to extremes is the sole cause of the trouble and noless some steps are taken to ameliorate the unsatisfactory condition of the business the principal sufferers-the grape growersmay be depended upon to right it for themselves

The vineyards of California are now in too flourishing a condition to be easily wrecked. The profits of the owners may be curtailed for a time, but the avenues now opened into which the product can eventualy be turned to good advantage, are too numerous to cause much anxiety as to the fuuture outcome.

Fighting among the two important factors of an industry like that in wines, is an unfortunate affair which would undoubt. edly be ended with much satisfaction to all concerned, on the basis of a mutual agreement to live and let live.

THE MERCHANT is authorized to state that the California Winery and Security Comwine were different in that country at that pany of this city is now ready to receive wines on storage to the capacity of three million gallons. Storage room in the

Bonfort's Circular contains the following

Vines are in a fine condition in Portugal: the blossoming has taken place in a satisthe transformation from flower to grape; if therefore thunderstorms and hail spare the wine regions and the rains do not comdown too heavily, we may look forward to abundance coupled with fine quality, if not thwarted by the phylloxera, (still making headway) the anthraenosis and pyralis.

In Bordeaux, up to the close of June, vintage prospects looked bright, but rainy weather begins to cause some uncasiness. If it does not stop soon there will be a wide spread dr pping of diminutive grapes. In the mountains it is feared the rains may seriously curtail the yield. In the Minervais, not only the grafted but quite as much of the older vines are doing well. promising abundance. The mildew is complained of in a tew localities about Cette, the warm, damp weather favoring the dis-

In Rhenesh Hesse, the vines still promise great abundance. From Rheingan comes similar reports, also from Harardt Mountain district, wh re the vines, it is said, could not well look b tter than they do.

In Hungary, the young grapes have made rapid headway and it appears pretty certain that there will be a good average yield. The vintage is a fortnight ahead of last vear's.

The coming vintage in Spain promises great abundance, in a good usiny localities the yield will be unusally larg . Some instances of disease are not d. but not sufficient to damage the prospects.

Advices about the Italian wine crop are decidedly favorable, with some slight exceptions such as Tuscany, Piedmont and Venice.

The vintage outlook in Algeria is, on the whole, most satisfactory.

THE FOLLOWING reports are given from the vine growing districts of the north and southern states:

Some mildew of berry and stem is reported in several vineyards on Lake Kenka. It is not regarded as serious, as the weather for some time past has been dry and cool, which is favorable to the healthy condition of the grape. Reports from the Hudson are favorable, and it is believed the fruit is as far advanced as at the same time last year. All through Western New York, if no unlooked for calamity overtakes them between now and vintage time, the yield and quality of the grapes will be excellent, probably better than an average.

In the vicinity of Greenville, S. C. grape growers have suffered considerable loss during this unseasonable year, but the crops is by no means a complete failure.

In the Piedmont and Albemarle districts of Virginia, there is an excellent prospect for a splendid crop of grapes. There is almost no mildew or rot up to

THE OFFEB ON the part of the Southern Pacific Company through General Manager Towne, to pass boys and girls desiring employment in the County, during the fruit packing season, over its lines at half fare rates, is exceedingly liberal and should aid materially in removing the serious obstacle company's warehouses has been secured in to the vine growing industry, experienced advance for over one million gallons, and through a scarcity of labor, when gatherthere is every possibility that the entire ing the crop. The Board of Trade and its is without any basis to support it, in the capacity will be employed during the com- subordinate branches, has the matter

HARASZTHY HONORED

A tirand Banquet tenders I the retiring President of the Viticulmral Commission.

A complimentary dinner was tendered to Arpad Haraszthy, the ex-president of the Viticultural Commission, in Proneer Hall, ast evening, by a number of the winegrowers of the State and the guest's personal friends. The lower hall of the building was handsomely and appropriately decorated for the occasion. The columns were wreathed in vine branches and garlands of the grape bush were hung about the hall. About 100 gentlemen sat at the tables, arranged in horse-shoe form, which glittered with silverware and colored glasses and which were redolent with the perfume of fresh-cut flowers. Large fruit epergues stacked high with grapes of all kinds, were a feature of the table decoration, and were mute but potent indications of the nature of the feast and business of the feasters.

Property at 8 o'clock the guests assenbled in the reception room of the building and half an hour latter adjourned to the banquet hall. Arpad Haraszthy occupied the post of honor, with Charles A. Wetmore on his right and Ira G Hoitt on his left. All present went to work at the business of the evening with a will and an excellent repast was provided. The menu, printed on neatly designed cards, was elaborate and the wines included all kinds of old California vintages, dating back to 1877

About 10:30 o'clock the speeches commenced, Charles A, Wetmore opening with a toast to the guest of the evening. Mr. Haraszthy responded in a feeling speech, and was followed by M. M. Estee, Frank Pixley and others.

Among those present were: Arpad Haraszthy, M. M. Estee, Charles Bundschu, Marcus D. Bornek, E. H. Rixford, Judge McFarland, Bozo Radovich, W. E. Brown, F. A. Haber, Consul Bee, Charles A. We more, I. de Turk, George West, W. S. Manlove, J. H. Wheeler, Colonel Andrews, Frank Murphy, Ira G. Hoitt, R. J. Harrison, J. L. Heald, H. A. Mariam, H. W. McIntyre, Joseph Napthaly, Byron Jackson, N. Wyckoff, C. N. Fox, George Sanderson, Dr. W. B. May, Frank Pixley, H. W. Crabb, Charles Krug, W. Scheffler, T. F. Harley, Charles J. King, Loman Wadham, E. J. Maslin, H. M. Lyrne, Frederick Pohndorf, George West, Frank M. West, Albert Lachman, Dr. Frasier, J. B. J. Portal, Louis Lenzberger, J. Euler, W. Weglein, Charles Kohler, P. Canessa, W. M. Bramhall, Donald Bruce, Harace Davis, J. P. Irish, W. B. Ewer, M. Lafrey, C. Buckley, J. F. Gawthorne, Arthur Still, C. J. King, A. Graver, Dr. John Hastings, Dr. R. A. McLean, B. Drevfus, J. Landsberger, N. E. Rose, A. C. Bassett, J. P. Smith, George A. Fisher, W. H. Worth, Clarence J. Wetmore, Charles F. Lutgen, T. C. Vau Nass, J. L. Beard, G. W. Langan, W. H. Whiteley, J. M. Curtis, Michael Flood P. Kleine, F. Korbel, A. M. Ehhetta, J. Charles de St. Hubert, Alexander Martin, Edward Kruse, J. W. Jarvis, Henry Casanova and J. Caire.

Califoania shippers to Eastern markets, will on and after August 10, get through Eastern rates from any railroad station in the State, the same as from San Francisco and other places hither is known as terminal points. In the matter of rates, that of \$1.40 in raisins and dried fruits, while in some respects equivalent to a reduction, In the matter of rates, that is higher than those of previous seasons.

beined by the wine growers of that presper limbbles to pass fre by to the same day took place and rathe ever-spreading off ston the winfoliage, on the grounds of J. ha H. Wheeler. The two plating the ade then a say deat Mocha station, when an attack was the threads in the new rick are reopened on a mammoth lunch table, fairly copper wir , and so me, unit groaning beneath a weight of timpling from the adwither, but ay, so a viands, flacked with wines of various the circuit, of a which is to be a kinds, every buth of which had carned a Pridongol attor of his very se prize in compatition with the products of rants is the most discuss in enemy to tell the tab.

The delicate dever of this celebrated vintage was sampled, and fully appreciated by the visitors, many of whom could not colored meter of our Casterna vin yards. Music enlivened the some around the tal display of large branches of fig. oliveand almoud trees loaded with fruit, from spending an agreeable afternoon in revo wing the many attractive features of the valley, the insurgents departed on their way rejoicing, with hearty cheers for their kindly entertainers.

ELECTRIFICATION OF WINES

Mr. Flavio Mengarini, a well-known cenologist of Italy, stated in a technical publication the results of his continued application of electricity on wines. Other tim. This has work high it in many to in scientists and wine in in Italy confirm vines, in the ruisin grap districts of Power the conclusions at which last year Mr. Mengarini had arrived upon his experiments in that direction, namely, that by proper action of the electric current the reduced, through a more than a finally organie substances in suspension in wine are rapidly deposited and to a degree also. This pest is also report by rking have wine; further, that the electric current of the Fresneyr yarls, but in free causes a slight loss of alcahol, and that the action of the current renders the wane more resistant against putrefaction. Thus the sand in common with wine making, electric action exerts an antise pine indicates, far no sybs have been med, of they me and in a shorter time than by the natural cellar treatment brings about the results of age in a wine.

perhaps aid the expression of the perfume time. of a good wine, overstepping the mark in acting upon it would rend r its flavor nanscous.

The procedure of Mr. Mengarini is the following, as described by his own pen-

The pipes of wine to be acted upon arplaced one alongside the other to the num ber which is thought sufficient for the intensity of the current at hand. The cork bungs have to be provided with two pars for years been har inapped by the poems forations, vertical and as distant from each any antagnistic position taken on the soft are to be prepared to each attaching a platina wire twenty centimet is long, pass. casks of 132 to 158 gullons they may be 20 to 10 centimeters in length and 6 or 8 the wirea in each of the two holes in the into the United States as I reach training. To continue In Series expelled in cost vinezar

the Coast, and were most hospitably enters the bottom of the cosk, to down to govern ous region. The heavy st work of the boy'r the publics had the street of

the state at first, during the recent State. After each operation take some sides of vincultural tensor union. The constright through a third hole in the early angly . was very off circ, and little was left of the pipeth, and examine the form of rite of p recontinue. M.v. for best the or lir to try the flavor

Mr. Mongarma considers the process on casy one and worthy to be popularized as be tempted on other occasions, to even it seems established that other pricesses feast their eyes upon the number or ruby of agoing a wine are either in or ten is a costly, and that especially to orling wines the advantage of read ring them by festive board, which was rendered if any-beleetrification more proper for transportathing more attractive by the fine ornamen- tion it is a chiap way of advanting thim. rendering alcoholization unto cossus.

Practice will show if the expectations of the orchards of Chas, A. Wetmore. After Mr. Mengarini erequestin dealeyhow or nelogy is ind-bt-d to him for his research's and public spiritedness.

Since last reports to the V. Filter J.Commission a material salary to have taken place within the last (way was all today weather has prevan I as through to interior countries, the thorness tor standing at \$5; during the night and 110 in the trytime, with a light north ry wind also the county, through do the mouth the countries. up to the Vina Ranch in T. has a county The Livermore variety coops is considerably severe incursion of the grap wing topport of this, information comes to boul of a good prisp and erg. Her the proposition is to dry the grap's onling thing is ing crop. A few are reperted unit ton getation, conditional on contain procs boing paid, with the baseful formulet rates, While a moderate electrification would should an advance take of one in the mean.

Conducts has visely doubled to enter upon extended and costly experiments in the manufacture of sorzham suzer. To avoid this, the President must do not be very remains that have thus for been applied the whole of the agricultural law, which to vin yields with varying degrees it so includes an appropriation of slowy or for case, are solphar, sats of copyer, him and serghanu. This will be of great benefit to Kansas and other Western men who have other as possible. Next the plating plates, pet by many of the specific centlements whom was deputed the basin as if make a experimentary tests. It is now to be higher ing through a little glass tube, annealed at that the financial assist age ran ler 11 v the the extremity meanest to the plate, so that government will be appared to the purpose the wire and plate be sustained only by for which it is read to h by the side to need

Fermions for the north of buy jest brane is bressed with B changism and this houth assets 510002 and hobbins with bourped declarations are 185 C. C. A. e. Say or I with the Arts. Martine Santa St. 700 at 1 - GPEC . A 71 C. min of 18 7 and a second

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SOME INTERESTING participles of a some frying in the left reat districts of Constant will be found in the solutions of this issue will be found by the sources of answer and most by reduce in the series and of the Menousky. The instructions and the this sapple 2 in high drug the vitality suggestions from that for Executive Officer (i.e., it is Spraying the tree of the analytic of the series of th Whileler to the percentus of the State Heart in Visitation Contributions and

THE NO YORK DE J is the respect amount of the Lagrangian is expressly designed for the profit and a bration of our posters entributers," which it is intend d to pull'ish, if the verse sent that paper. This is, will live the files its mpt of any material and daily to coming the development of American algenius and write rhandy "file and gife? want has well as more using the abovely ex codingly great popularity of the

Him is an opportunity for an incorp. to become a letrated by a nelection off is sions writeness, one side of the short test. Party Lilitar forth of prog Now York.

PRIVIDOXERA.

A California Associated disputch says thorg. W. Rossey, R. Casal at Burk cay, has reported to the State Dop atmentagion the treatment of diseases of vines in Francisco His os the the actual coal for stry vines by phyloxericus 1 200 000 horal or about wishalf of the varyals of France. A few years ago the brench o vernment fird cpure of frames to the triviator of a remody for the plague, but while your is attracted to prevan Layebean herver de Consul Rosse very stimut a that as far, France has lost 7,20 group of frames by the destruction of her vine yields by physics (rate $\Delta m_{\rm b}/2$ the suphur, sulphate of in a and removing and burning disease I roots and I at a

THE COST OF VARIOUS WARS

The configurations and and point I to be Nation the trime in war est br to 1200 editions and many but the wire and plate be sustained only by the glass. The size of the plates should more practical and r habe men't carry R ssign a negrow men and the little of the glass. The size of the plates should more practical and r habe men't carry R ssign a negrow men and the little of the glass. THE ANNUAL local consumption of braidy 7, 000 men and 1 moral between the particles broad for casks of 10 to 13 gallons. Pass

The ASC Choung and Agreement and the do continued in inflations. A vertex let 1 to a both or in singer this after with plates 20 centimeters long and 21, yearly product only 11 to a continued in 1875, once 1 to Max or integrable parts of weight 1 parts of broad for casks of 10 to 13 gallons. Pass

This speaks well for the until imported win Fro. spint 5 cossesses in any or 1 viner round, then do it is lead to the

A small detachment of the N. E. A bung and turn on, the two plates haves so Frances C. C. Agenst 1 1888 [15,000 men and 125 000,000 minory. In the numbering over 600, invaded Livermore that they be parable. They shall the British to Miround Agency of its France-German war France 1 st 225,000 Valley during the late encampment on immersed well in the war but no teach of futures in the Parible C. St. States and men and 9.288,000,000 minory. And now on a provising some elember than all befored. The estimate is that France and Bursh to be there in pur in the field D. 500.5 make the new lates to running. A terms and Principles to at these with its many more La la full control men eiger for each lives on European bottle plancontribute of the grown fitted or be

AN INDIAN OF THE OLIVE.

at sthat a distinctive ln ti post to the Care as also by the make its apparty or this and during next month. It is especial of the fly with hard-shell wings gains it is only in this diprodutions are mode by bound in the way heart of the someonizat deliye in proportion of three pour date tiffry gillons of water, in which has been lies dy done and one-half onness if blood in , will kill off the moset without ling damage to the tree or fruit. S. W. Kripernek has kin by farmshed us this mformation. In riference to the use of assumed rome his to kill the insects. Mr. K heatrek thinks they should be very sparagy if ever used, for the rason that the pare a might possibly be retained upon the rict and make its consumption dangerous

CALIFORNIA WINE FOR MEXICO

Apress tologram from El Paso, of July I says. Parties in E. Paso who are intia de'y se praint d with the M vie in wine tral are on the point of mangurating a now out rights, which prosunts overy prospost of success. There is getting to be an retire I in in I for Chifornia chirats along the line of country tray is d by the Mexiand Control and its branches. French daret has heretofore been extensively a ground hot it is first falling into disfavor owing to the fact that nearly all is wavey abilitribility The projet is to conspirt the claret in bulk direct from buformer vinevards in tank cars to the principal M-xie in mark its, and let it there go through the final fermenting and refining processes. The first experiment will probably be made in the city of Griddleira. The wine is to be stor I and sold in pottery ware, which is that place is of exsellent quality and very cheap, while glass ware of all kinds is very - spensive throughout the republic, J. M. Holderness, a noted wire reporter of Fl Piso, to the deavening to get the new enterprise starts p

AN IMPORTANT LAW

the whom we given the ten termsey or the Later, regarding one Lagords therfo dipokas using alorum First outrant be that the cars must not pripar due of the rectificity for partially at not of an aboy of motal which nems in 100 parts of weight more than lipits f weight had. To cans must the time from the interior side by an all viol metal which contains in 100 parts if weight more than ten parts of weight I The cars must not be furnished with oll r glazing, which after having

RECLAIMING THE DESERTS.

The agricultural experiments which have been proscented for some time, far down on the Colorado Desert,' furnish interesting matter bearing in the future value of these lands. Some one recently made the prediction that the deserts would finally be erowded out of California-that in time they would all be redeemed by tillage. That will depend upon the accessibility of water. It can generally be brought to the surface by boring a few hundred feet. When water can be procured, the two conditions of heat and moisture will insure abundant crops. The surface of most of this desert land is composed largely of comminuted shells. It is therefore rich in the elements needed for the production of fruits and vegetables. The earliest experiments with water on the desert, were made at the railway stations. The drippings of the first water transported there by rail produced remarkable vegetable growths, At Indio wells were bored for the supply of the station. The station secut found that he could produce the earliest fruits and vegetables by the use of water. Grapes would ripen in June, and figs at about the same time. Welons would mature nearly two months earlier. Three crops of grapes were taken off the same vine last year Water has now hern obtained at a number of other places on the desert. The theory is that it can always be found by boring deep enough. The reclamation is, of course, attended with considerable cost. But when once a well, or a number of them, have been successfully put down, the experiment is carried to the point of auccess.

A. N. Towne, General Manager of the Southern Pacific railroad, and a number of other citizens, have taken great interest in the agricultural experiments. A small box containing samples of fruit grown in the station yard at Indio, contains a cluster of muscat grapes, the berries all large and well matured, two clusters of mission grapes perfectly ripe and of good size, together with a number of ripe figs. All these fruits were of good flavor, and presumably, were well matured by the last days of June. On account of the great heat and the absence of frost in the early part of the aeason, it has been as good as demonstrated that fruits and vegetables can be matured in advance of most other parts of the state. The ripe and luscious fruits grown and matured on this desert in early summer, are a successful experiment, indicating a great future for these waste lands. The new developments may be slow, with a variable cost of reclamation There are now several wells on the desert, which bring water to the surface. These will be gradually increased. Wherever one of them if successful, a number of fertile and very productive acres will be the result. The capital and enterprise which turn barren sands into a garden spot, are never imployed amiss.

Another experiment which may one day be successful, will be the cultivation of the date palm. The tree is a habitant of the desert from the Arabian Gulf to India. It flourishes in a rainless country and strikes its roots wherever the moisture is near the surface. Thus, where the date palm is seen, though there may be no spring in sight, travelers regard it as a sure indication that water is not far below the surface. water can be brought on to the whole of It requires great heat to mature dates. A these are mostly grown on upland, or upon some places water can be procured in abun- 'layered.''

true home of the date palm is on the desert, it has never covered all the sandy waste. But where the wild palm is found, it is a fair inference that the date palm will flourish, if water comes near enough to the surface. An addogous fact is found in the wild grape vines growing in great abundance in the northern part of California. These wild vines, festooned upon trees along water courses, are accepted as evidence, now further confirmed by cultivation, that all the conditions are favorable for the culture of the grape. These wild vines have also been used as resistant stocks on which to graft less resistant varietics. On both the Colorado and Morave Deserts there are giant cacti. Here and there are found inferior native palms, having, of course, no close relation to the date palm of commerce, but conveying, at least, a bint that where one species of palm will grow wild, it is probable that other and b tter varieties will grow if attention is given to their cultivation.

The latest authorities confirm this view, and warrant even a more sauguine expectation. One of the most satisfactory articles on the habitats of the date palm appeared in the Corolill Magazine and has since been republished in the Echetic Magazine. It is there shown that the date palm grows at present almost exclusively in the great desert zone of the Eastern Hemisphere, That zone busins in Sahara, crosses the Nile and Red Sca, is continued across Arabia to the Persian Gulf, and thence into the Indian Descrit, and indefinitely, into the sandy wastes of Gobi. Its western limit is Senegal, its eastern the Indus This vast sandy waste, designated by several names, is the true home of the date palm. It is cultivated to some extent elsewhere, as in Portugal, in the southern parts of Spain and Italy, and specimen trees are found in the vicinity of Nice. But the dates of commerce come from the desert regions first described. The fruit comes to the greatest perfection when there is a combination of these conditions, viz: Desert, drought above, and irrigating springs or streams below. The authority anoted affirms that an acre of land devoted to the date palm, will produce more food thin any other known crop except the plantain. Each date palm in full bearing will produce from eight to ten bunches, the total weight varying from one hundred to four hundred to four hundred pounds. As the fruit does not ripen in the northern part of Italy, nor in France, it is inferred that it would not do much better in middle and northern California

But as to the great Colorado and Mojave Deserts, what might be done there? The grape, orange, fig and apricot can be brought to perfect maturity there. So much has been ascertained from the experiments already made. These are of value beyond the samples occasionally brought to public notice, b cause they suggest future great possibilities. A few years ago these deserts were set down as utterly worthless. They include on area large enough for a resp ctable state. Now it is demonstrated that the land is not worthless wherever water can be applied to the surface. But in all such instances it is found to have very great productive capacity. It these sandy wastes. The experiments thus few mature every year in this state. But far hardly go further than to show that in

soil not classified as desert. While the dance at a moderate depth. Perhaps these deserts in time will be dotted all over with onses which will finally touch each other, on which the most conspicuous feature will be the date palm as prolific as it is now on the Arabian desert. Who knows? We shall only find out by future experiments, stimulated by the same enterprise that has already produced the grape, the tig and orange in the desert -Ex.

PROPAGATION BY LAYERING PROCESS

Much has been said and written, of bate, in regard to propagating grapevines by what is termed the "Layering Process, and under some circumstances, to a limit d extent, it may be a convenient and useful method to put in practice. A writer in the Vineyardist, who evidently speaks from practical experience, says:

The very easiest and quickest method of propagating the grapevine is by "layer-A cane of last year's growth instead of being trimmed) is simply let down to the earth and covered in a trench four or five inches deep and two or three feet long, the tip end being allowed to project above ground. It does not much matter when the work is done either before the bads break or afterward during the fore part of the growing season, nor how many bads the projecting end may bear; the layer will be certain to root in any case, and it may be separated from the parent vine in the fall. If then found not duly balanced as to root and branch, the proper equilibrium can be easily produced by trimming the top. The result will usually be a fine young vine, about equal to one from a twoyear-old cutting. Although it is advisable to use a cane of last year's growth, we believe that a branch of any age may be layered with snc ess. In neglected vineyards we have seen such branches which had taken root where they had only touch ed the ground

By this process, grape growers, who have no propagating facilities, can easily and rapidly fill all vacancies in their vine yards, and thus "even them up" much quicker than by setting roots from cuttings, as the "layerings" can be left to grow for a second year, when they will make great progress, being sustained and pushed by the parent vine, in addition to their own roots. But it should be distinctly understood that this process is valuable only for the purpose of filling in the missing vines from old vineyards, for vines thus propagated cannot be as successfully transplant ed as those from cuttings, as in separating them from the parent vine they die or become weaklings in new situations, the same as if a young animal was taken from its natural sustenance and put at once npon a water diet.

As a general thing, when the vineyard is trimmed, whether in fall, winter or early spring, a cane can be found of sufficient length for "layering" at each vinevancy, and left for that vacancy, to be "trenched" at the proper time; and it may be observed that in cases where there are no canes of sufficient length to reach the vineless stake, no time will be lost in training one for the desired purpose, one season, and "lavering" it the next spring, as it may be kept connected with the cane two years, when it will be much further advanced than one from a cutting set a year or two earlier than the case which was

BEET SÉGAR

All the farmers about Watsonville, who planted the imported sugar-beet seed given them by Claus Spreckels, are watching their crops with great solicitude. The berts are now nearly grown, and the intention is to gather them in the early part of September, and stere them in readiness for milling. Nearly 200 farmers planted the seed in fields of from five to twentytive acres. Altogether about twenty-five thousand acres in the section are planted in sugar bests. A few weeks ago some of the half-grown leets were brought up here for examination and analysis. The result was very satisfactory, and all engaged in the new enterprise feel encouraged and confident that this is but the beginning of a great industry.

The buildings of the Watsonville plant are nearly completed. Engineer Waters, formerly of the California Refinery, has entire charge of the Watsonville project. and 200 men are now aiding him to hasten construction and equipment. Mr. Waters accompanied Mr. Spreekels to Europe last year and while there he was able to make a thorough study of beet-sugar manufacture. Dr. Wachiel, a German chemist. who returned with the party from the European prospecting tonr, is at Watsonville, doing all he can to assist the best cultivators. He was engaged in the beetsugar industry in Germany, and his experience is of much value for the farmers. All the machinery brought by Spreckels from Germany is at Watsonville, in readiness to be set up when the buildings are all done. In addition to other structures, sheds that will hold from eight to ten thousand tons of heets have been built. These are for storage purposes only. A side-track to the factory from the Southern Pacific line at Watsonville has just been build. The farmers have been promised sale for all the beets they will raise. Further than this Mr Spreckels has offered cash prizes those farmers whose crops the best average in product, other things b ing equal, and also to the farmers whose beets show the highest persentage of sugar. Mr. Spreckels expects to be here the last part of the mouth, or the first of next, and he hopea to start the new enterprise in person. He has been very busy. East, arranging for the erection of the great sugar refinery in Philadelphia. Some of the machinery for it is now being made in Pittsburg. Fifty steam-engines for use in as many centrifugal refining machines are being constructand the number of these costly machines gives one a fair idea of the elaborate outlay necessary for the great project,

BOTTLING WINE

The New York Evening Post reports the curious discovery in France that good old wine is differently effected by bottles of different manufacture. Wine kept in socalled Rouen bottles improve, while other bottles seem to impart the harsh flavor of new wine. The chemist Peligot goes so far as to attribute the changes which wine kept long in bottles undergoes, to the action of the ingredients used in the preparation of the glass. It appears that an undue mixture of lime and magnesia, which are often substituted for soda and potash on account of their cheapness, acts injuriously upon the wine. In those bottles in which the wine naturally inproves, the proportion of time is found not to exceed 18 or 20 per

NATIVE WINE SHIPMENTS BYSEA. OUR

PER P. M. S. S. CO'S STEAMER ACAPULCO, JULY 30th, 1888

TO NEW YORK.

MARKS.	**IIIIFR*	PRINCIPAL INDICES	TENTH	0.411454	#1 Ch
ь ь с	· Carpy A Co .	2 barrels Wine 15 carrels Wine 32 barrels Wine		10 711 1,57*	\$108 250 163
V&Co .) 1 ()) 4	4 burn : Brundy 25 burne's Wine 5 burnels Wine		1,233	1 4 34 \$ 1 34 1 14 1 4 34
Vio .	Schiffing & Lo	25 barrels Wine Gostaves Wine (50) barrels Wine 2 barrels Wine		1,2 G 16, 7,5 %	2.53
M B D & Co	Divid A Co reor man I Bros B Drey'ns A Co	10 barrels Witte 100 barrels Witte. 18 kees Witte		1.5.7	2 500 2 500 150
t A Co	Empoli, Bordes & Co. Napa Valley Wine Co.	1 bairel Wine 1 bill birrel Wine		1,925 50 26	24
T F	A Frz Golman X Jacobi	12 barrels Wine		1,250 629 411	62 21 29 56
Η	Williams, Dimotel & Co	21 tarrels Wine Toulfstarrel Brandy : 2 kegs Wine		1,235 [†] 25 20	3
Total amount of Wine Total choice of Brandy				21.973	

T de B, Acajutla F Dineri & Co A Il in oblong, corneo F Mecks		 15 50	*10 20
RE&Co, Punta: Arenas	to Beases Wine	 30	25 (150)
J.P.C. Corinto	o 24 mses Wine		= 1 :4 = 5 19

TO GERMANY - PER GER. BARK DECISCHLAND, July, 1888.

F.S. Desde-beim	A Green aum & Co .	Loarr (White	56	2.15
**		2 cases Water	9.50%	9
G, Brem n	J. Gundlach & Co.	Fill I triels Wille,	2,142	1,171
OP S AONA	Napa Valley With Lo-	2 borrds Wine 4 barrel Wine 504 p - kages Brainly		50
JFS m ring, Kiel	C'Peterson	I barrel Wine		23
Walden, Bretnett	Waldeli A. Collection	501 p. (kigges Brainly)	17,630	10,615
TWT. Br men	Viller	I harre Wini	4.64	25
CB, Bremen.	M Scherpel	I half-barrel Wine .	26	13
H F X, Bremen A W, Bremen S in diamond, Er men	**	1 barrel Wine	1 ~	2+
A W. Bremen	A Westschir	3 barrels Wine	133	50
8 in diamond, Er men	Plachilling & Co	37ti barrels Wine	17,7396	10,675
B M, Berlin		Loctare Wine	21	27
A D. Berlin	*1			10
S V B, Berlin	**	I keg Watte	10	10
D B, Hamburg	19	2 barre's Witte	117	97
N V B, Berlin D B, Hamburg A S, Dresden E R & Co, Dresd n	**	Leaves Wine		350
ER&Co. Dresd n	**	R barrels Witte	128	1284
**		I barrel B. inity	50	42
IT, Posen	4.3	I keg Wing	5	5
M W. Posen	1.4	I keg Win	ā.	5
I, W. T. Kemper	**	l keg Wine 2 barre's Wine 1 rases Wine 3 barre's Wine 1 barrel B, mity 1 keg Wine 1 keg Wine 3 seatoos Wine 3 seatoos Wine	50	41
A E. Koln	* 4	Lestave Wine	254	28
G S, Koln		Thorse Wine	5.1	51
M T. Numberg	1.0	R he is Witte	19	10
P.W. Hamburg		Liker Wine	22	22
J J L, Kohn		JA 25 Wine .	6.3	63
F W S, Hamset		I kez W ne I k gs Wine 2 kez- Wine	::7	3.
Dr A S. Storberg		I kee Wine	116	16
A.S. Britzain		I kez Wine	16	16
L P. Delitz		1 kee Wine.	16	161
Foeln, Bremen		1 keg Wine	3.1	34
A M K, Werzbarg		I barrel Witte	35	35
L h, Trinity	- 0	L barrel Wine	35	35
O.D. Massalanna	b 4	1 barrel Wine 2 octaves Wine	15	15
F M, Bremen		Leash Witte	62	62
L M' Diamicii	**	1 cask Wine 1 birrel Wine	53	53
**		Lie Wine	10	10
C.F. Barman		Llar Wine	17	17
the Bannin		Lker Wine	22	- 55
CF, Bremen DS, Bremen S in diamond, Bremen K & V in diamond, Bremen	**	1 keg Wine 1 keg Wine 1 keg Wine 10 harrels Brands	501	300
W h V an diamond Presson	hobber & Van B. roon	Al come Witte	. 14.7	300
Both v in diamond, premen	Romer's Call Dergen	5 kegs Wine	1.5	15
**	31	3 had-barrels Winc	72	72
	W. France	100 barrile Wine.	5,000	2.500
		1 barrel Wine	3,1101	2 500
n n, premen.	SCHOOL OF EXCHIGATION	1 barrel Wine	50	35
Distance of Despuis		2 barreis Wine.	120	100
H B, Bremen TT M, Bremen R In diamond, Bremen P in diamond, Bremen		111 caron Wina	1.20	100
P in diamond, Bremen	**	10 cases Wine.		35
CJ, Bretten	**	I has Mann		
TTM. Bremen R In diamond. Brenien P in drauiond, Bremen C J. breuen M G, Bremen	**	I box Witte 3 casks Wine	1.41	******
		SECRETARIO	1 -(1)	7.5
Total amount of Wine.	LI mana and		12" 12 1 12 1	- LC 100
Total amount of Bran &			15 015	10.967

The Harris Park Santage Value of

10	HOZOLULI Pa	ER STEAMER AUSTRALIA		
G W M & Co	Kohler & Van Bergen	110 kegs Wine	550 1,250	7 HH.
W 8 L in diamond	5 Lachman & Co	I barr Wine	50	(4)
WCP	B Dreyfus & Co.	2 kegs Wine 3 barres Wine	223 150 j	193
	14	35 kees Witter.	350	730
L & R	Lachman & Jacobi	2 half barre a Wine	250	234
L &C		5 half- orr is Whiskey	134	374
L D	W Interding & Co	Dienses Whiskert Libarrel Whiskey	34	17
H & W	WHI Holmes . A pad Horiszthy & Co	2 kegs Wine	54 255	219 219
F A S & Co	C Shill ng & Co	2 asks Wine	320 122	291
Енс	1	77 kegs wine	150	150
WSL		L barrel Whiskey	11	*1
HAK in diamond		2 may a Wene 240 kg a Wene	1,6,5	- A
"	1	20 cases Wille		1 1.36
fotal amount of Wine, Total amount of Whish	375 cases and ey, 14 cases and		6,625 249	\$5,357 #81

MISCELLANEOUS SHIPMENTS

1184115	ADON.	. 1 1	kI	6 ALLONS	TALL P
Honoru(u	-	Forest Queen	Bark	25	
Canada		Mexico	71 - 11 - 7	1.	
Victoria			W string	515	
Export		A TOAT NOW YORK	St. 1 F	1.454	
china .			Steamer	1.1	
Assistance in		Lincot Pa	1 office 8	4.5	
Hoo Life		Zealis La	21 11111		
Lipan		Beign	* 6. 1710 7	50	
triung.			St. mirror	1 f H	
Months			50 pt - 5	1.0	
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respect		Labort vde	14	3.164	
Tota	;			7,179	5 6335
		Sancina etcanices etitements		25,081 25 ms 11,111	\$11,330 21,825
	arami cal-			69,705	5391,155

CHALLENGE

Double Acting Wine Force Pump



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West of a fuelow of Wine Error of Garden and Steam Hore United and qualities Wene Cores of a Udescentums. Wine

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SAN FRANCISCO, CAL.

Wine From Rose Leaves.

Says a lady of this city, who is a good housekeeper "I visited a friend recently," and she gave me a glass of wine. It was of a pale amber tint, and had all the sparkle and flavor of champagne, and when brought as much as the Fresno growers opened popped loudly. It was effective, though mild, as a stimulant, and I thought it very fine. Tasked what variety of grape bunches on the ground closse gravel being it was made from, and my friend told me the best. In case of rain, the small grower it was made from rose leaves. "Take the fresh picked leaves," she said, "and put into a par alternally, a layer of leaves and sugar, and pour over a little cold water! In four days strain, bit stand a week and hen bottle for use. The wine is a de-lightful beverage. Combit Journal

LIVERMORE RAISINS

Mr. L. E. Rickey, of Livermore Valley, had most excellent success last season in drying Muscats in the open air. The raisins made were of good quality and obtain for their crops on the trays. The quickest no tho lof drying is by laying the can always find enough matting, canvas, boards and other like material about the place to cover the crop. When placed on the ground, the bunches do not need turnring, the under side drying quicker than the upper.

MASTERIOUS DEATH OF VINES.

An investigation into the causes of the mysterious death and decline of grape vines at certain points in Southern California has been in progress at the University Experiment Station for several weeks. The work was undertaken to test the results announceed last year by reinvestigation, and because the loss and vexation resulting from death of vines continues in the same localities affected last year.

Quite a large collection of vines in different stages of decline was secured from the growers. In some cases the vines was almost lifeless and had made but the most feeble attempt to break its buds, in others one cane had made a fairly vigorous start, while others did little or nothing; in others still all the bads had thrown out a few inches of very weak cape. Thus we had for examination vines in various morbid states. The examination of this material was also much helped by careful description of the progress of the trouble by the growers and by personal investigation in the field by Mr. F. W. Morse. The results of the examination as to locating the troubls in the vine itself were mainly negative as was the case last year. Although most careful microscopic examination of the leaves and wood of the affected vines were made, there was no parasite of either animal or vegetable nature found. In fact the tissue of leaf, cane and trunk was found to be perfectly normal, except that there wers clear indications of defective nutrition resulting from a stoppage of the sap supply. Why this stoppage occurred there was nothing in the vines themselves to show In some samples submitted, a part of the sap ducts were partly or wholly closed with gummy material, presumably the result of condensation of the small sap flow, because of lack of pressure to carry it ouward to the nourishment of the newer growth, but there was not, on the whole, nearly sufficient oostruction to prevent the flow of sap had the flow been normal. In fact the decapitation of vines in the vineyard showed that there was in some cases very little sap flowing and in others pone at all. This checking of the sap flow if not the immediate parsite attack and where it sometimes results as a secondary effect, the tissue of the plant shows the disorganization produced by the earlier invasion of parasite growth. In the cases examined this source of trouble was plainly precluded because the tissue was normal and healthy, except in the noticeable deficiency in the sup flow. This fact was determined by repeated examination, both of cross and longitudinal sections of the new growth, the younger wood of the spurs, the trunk of the vine and the roots and rootlets -- even to the smallest which could be found on the vines sent to us.

The conclusion is a verification of the results set forth last year by field examinations by Mr. Morse and by microscopic investigations in the laboratory-an account of which is given in the Viticultural Report of the University for 1886, to which the reader is referred. His conclusion was that there was nothing found that would indicate a true disease which might increase and spread to neighboring vineyards, but that tha phenomena were teaceable to more or less accidental and local peculiarities of soil, sesson, moisture, conditions, etc., which may not recur and produce similar effects for many years. It is altogether likely that the continued decline of vines Alexander Duncan, John Orr; Occidental,

somence of autovorable conditions prevailing in the winter and spring of 1886. Since the loss has been greatest in districts where vines have been longest cultivated, it is possible that the evil has been aggravated by the gradual exhaustion of the soil; pointing to tertilization as at least a partial remedy and preventative by enabling the vines to rally from their enfeebled condition, through the recuperation of the root system.

EARLY IN THE CIELD.

The committee appointed at the meeting of the Sonoma Fruit and Grape Growers' Association Saturday to draft an address to the citizens of the county, relative to the proposed exhibit of the county products to be made at the Mechanies' Fair, coveluded its labor Monday. The address represents the sentiments of the association and is recommended to the consideration of every citizen of the county who has its welfare of bearts

Whereas, The products of Sonoma county have heretofore held the first place in competition with those of other counties of the State, and

WHEREAS, It has been decided to enter iuto competition again at the approaching fair of the Mechanics' Institute of San Francisco, and a determined effort is manifested to wrest from us our well deserved laurels and

Whereas, It is desirable to maintain our reputation as the "banner county" of the State, and this can be done only by general and hearty co-operation.

Resolved. That we hereby call upon our citizens to make a vigorous effort to secure an exhibit from our county superior to anything hitherto off-red.

The fair will be held from August 7th to September 15th.

Other conuties are already at work gatheriog articles for exhibition, and some of them have secured as much as \$1,200 in cash, to be expended in making their respective displays attractive. Our county ean maintain its banner position, but the competion will be flercer than ever. If we are not to lose our good reputation, we must waste no time and spare no efforts, Other counties are weeks ahead of us We must have the choicest products that can he gathered, aud, if possible, \$1,000 in eash

Those who are ever ready to contribute from their farms and factories, should also give, and aid in getting money to show their contributions to advantage. We must have immediate personal effort, yours, as wells as ours. We hope you will begin at work. The several railroad companies will carry all articles intended for exhibition free. Cash premiums aggregating over \$1,200, are offered for individual display. Contributions of cash may be forwarded to Mr. G. Tupper, the County Treasurer, who has been appointed treasurer far the exhibit, or any one of the following persons will advise concerning shipments, viz

Cloverdale, W. D. Sink, J. J. Jones; Healdsburg, F. B. Mulgrew, T. S. Merchant; Geyserville, Ex-Supervisor Ellis, John Markley; Windsor, H. J. Pool, W. J. Hotchkiss; Fulton, E. A. Hove, E. W. Woolsey: Guerneville, T. Heald, G. Guerne; Eorestville, L. Ross John Clark; Sebastopol, William Berry, C. Solomon; Duncan Mills,

observed this year is but the natural W. C. Meeker, J. D. Connelly; Bodega, Mat Aiken, M. McGanghey; Bloomfield, G. W. Knapp, A Lefebyre; Petaluma, Wm. Hill, G. W. McNear, Geo. F. Allen; Sonoma, D. D. Davidson, Robert Howe, A. J. Poppe; Glen Ellen, R. C. Hill, H. E. Boyes, M. K. Cady; Los Guilucos, H. Hilton, J. Kerridge; Knights Valley, Calvin Holmes; Sonoma valley at large, J. K. Luttrell; Santa Rosa, J. W. Ragadale, J. F. Smith and E. P. Colgan.

Hoping for your prompt and hearty cooperation, we are

Yours truly.

JOHN ADAMS, E. B. Rogers, F. E. SHEARER, Executive Committee Santa Rosa, July 16, 1888.

THE STATE BOARD OF TRADE.

The annual acceting of the State Board of Trade was held last week. General Manager Brown and Secretary Davies sub mitted a report in relation to the labor supply for the season's fruit harvest. It was to the effect that the grain harvests, the work of picking and packing fruits now ripening in the orchards and the vintage of the vineyards will give employment to a large number of laborers in excess of those now offering their services in this work. At the same time a large number of boys, from 12 to 18 years of age, and of girls of suitable age, to be of service in the packing and drying establishments of the State, are idle in the large cities and towns. These facts having been brought to the attention of A. N. Towne, General Manager of the Sonthern Pacific Company, the question has arisen whether the labor of industrious boys and girls cannot be utilized in the orchards and vineyards of the State. In order that some good may be accomplished in these directions the Southern Pacific Company offered to facilitate the transportation of boys and girls from Sun Francisco, Sacramento, Los Angeles and Stockton to any part of the State where their services may be required at the lowest possible rates of transportation, and to accomplish this end the company was willing that the matter should be under the control of the State Board of Trade and the subordinare branches. It was also required that all requisitions for help by those desiring to emptoy labor shall be made through the local Boards of Trade or Improvement Associations and sent to the headquarters in this city, the Improvement Association of Sacramento, the Board of Trrde of Stockton and the Board of Trade of Los Angeles. By this means the supply of this class of labor will be under the supervision of the work at once, and, also, get your neighbors | State Board. Boys and girls excepting such employment shall be forwarded to their destination free of charge and returned to their homes free of charge upon presentation of the certificate of their employer. The plan as outlined by the report was adopted, and the officers of the board were instructed to carry out its purpose. The receipts of the year were reported to be ecllect and forward your subscriptions or \$11,107.75, and the disbursements \$9,336.20,

HINES ON GRAPE DRYING.

The subject of grape-drying, which is a prominent one in this State at the present time, is now being agitated in Livermore Valley. The experiment was tried in Fresno last season with good success. Almost any variety but Burger will do, and Eastern correspondence has developed the fact that at a time about an eighth of an inch thick.

there is a brisk demand for all that can besupplied. The Fresno output last season was sold at 31, cents a pound-equal to about \$22 a ton for the grapes; but Eastern commission men predict even better prices this year. At the viticultural meeting last Saturday, it was held that the grapes could easily be dried in the open air in Livermore, probably in about 11 days. Clean gray-I was recommended as the best place to dry, and trays could be used to cover the grapes in case of rain, Grapes to be dried should be very ripeeven left to shrivel a tritle; or the stems may be twisted, and the hunches left to dry on the vine. These grapes are used by poor people, in lieu of raisins, and make a very good substitute for use in puddings and cakes. This opens a new industry in this Valley, which will dispose of many of the wine grapes, and tend to improve prices for the remainder.

A FOOL AND HIS FOLLY.

The late King of Bavaria was renowned for his eccentric notions, one of which was a great repugnance to old wines. As the celebrated Wurzburg cellars contained some wines of remarkable age and character, and such stock became a thorn in the flesh to the poor half-demented King, accordingly the grand cellarman—a baron and a peer of the realm-was instructed to dispose o it; this he did to a German dealer who has since sold in various quarters. Messrs, Spiers & Pond have become purchasers of some of the curiosities from the Roya Bavarian cellar, which are to be obtained at the East Room in the Criterion. Among them is to be found some Steinwein, grown in the year 1540, when Henry VIII was reigning; some Leistenwein of 1632; Steinwein of 1731; Johannisherg of 1811; and Rudesheimer and Hochheimer of 1822. These wines are said to be a beautiful golden color, and perfectly clear, and even tha oldest retains considerable bouquet. That firm also offer some of the Duke of York port, viutage unknown, but bottled in 1798, which is a great enriosity and said to be in fine preservation .- Harper's Weekly.

ORIGIN OF THE WORD TARIFF.

At the southern point of Spain, and running out into the Straits of Gibralter, is a promontory, which, from its position, is admirably adapted for commanding the entrance to the Mediterranean, and watching the exit and entrance of all ships. A fortress stands upon this promontory, called now, as it was also called in the Mcorish denomination, "Tarifa." It was the custom of the Moors to watch all merchant ships going into or coming out of the midland sen, and, issuing from this stronghold, to levy duties according at a fixed scale on all merchandise passing in and out. And this was called, from the place where it was levied, turita; and from this comes our word tariff. - Confectioners' Journal.

A CURE FOR WET CELLARS.

The following, it is said, is an admirabla cure for wet cellar walls: Boil two ounces of grease with two quarts of tar for nearly twenty minutes in an iron vessel, having pounded glass one pound, and slacked lima two pounds, well dried in an iron pot and sifted through a flour sieve. Add some of the lime to the tar and glass to form a thin paste, only sufficient to cover a square foot

METHALATED SPIRIT

In view of the present situation of the Methyl alcohol bill, the tollowing from an English exchange is interesting

It is well known that a large are untell alcohol passed into commerce duty-free to consil ration of an admixture of ten par cent of naphtha, which is supposed to a re der it undrinkulde, is nevertheless consule ed as beverage by the less scrupulous classes of our large towns. Couch maphtha is not unfrequently imbibed with or with out admixture of other fluids by degrad d individuals, whose palates have been viciously educated by partaking of officinal methylated spirit. The disastrous physiclogical effects, the destruction of the health of the drinker and the increase of the diprayed thirst which calls for repetition of the fiery draught, are matters of which it is difficult for legislators to take cognismowithout infraction of personal liberty. But the fraud on the Excise is a matter of which the State must take notic , and the less of business which the pernicious taste causes to the producers of honest wholesale heverages justifies, and indeed calls for united action on the part of the trade. R ady sympathy and co operation may be tooked for from manufacturers whose products or processes are detrimentally affected by the presence of imphths in the alcohol they require to use, and who would be glad to have it replaced by some substance introcuous to their manufacture, while efficiently preventing consumption of the admixtaras a beverage. There are several such substances used on the Continent, at the option of the manufacturer who requires the alcohol. Petroleum spirit, pyroline of coal tar derivative of off-usive odor and taste) and some similarly constituted bodies, incapable of separation from alcohol by redistillation (which is not the case with naphthm), present a sufficiently wide rang of selection to meet the requirements of manufacturers, the difference of cest being trifling in comparison with the advantages afforded by choice. The general favority in Germany is pyridin, which, as we have said, is procurable from the waste of gaworks, and can be mude the aply and abundantly. Mr. Porbes Carpenter, In spector of Alkali Works in the Liverpool district states that it forms the offensive element in "d-vil water," produced at a certain stage of the purification of gas. Its composition is represented by C H N, and it is not porsonous. Professor Hofmann of Berlin, was the first to suggest its use for the purpose of rendering alcohed undrinder ble without impairing its utility for ether purposes. The other admixtures would be specifically named according to the compounds used, and a general term for all spirits so heated would be soon designed Respectful but firm representations on the spoints from the trade and others in cooperation would doubtless be met with consideration by the authorities, especially us a modification of the existing regulations would benefit alike the State, the trades interested, and the community at barge The Chief Constable of Lilmburgh has

drawn attention to the extensive sale of methylated spirit on Sunday afternoons by druggists whose doors are open for the BY PROF. GEORGE HUSMANN dispensing of "medicines,"

LIVERMORE GRAPES.

The Oakland Evening Tribuos does not believe in the quality of grapes is Livermore valley for drying. It says we tear

that the Lavermor grape growers will be compelled to abundon their idea of drying then grap s, which they propose as a measure of self defense against the combine tion said to exist among the winery mento tone down the price of grap s. The fact that the best wine grams, such as have been burnery planted in the Lavermore yery at as a rule poor material for make , rushes. They are rather juncy than i. dy, and when dired, little remains but skin and bone. But this is no reason why the growers should be discouraged there are at least two solutions of their present difficulty, either of them much better than that which has been proposed. If the gripe growers of the valley will combane and organize as a co-operative association we do not think there would be any difficulty in securing the necessary capital to furnish the plant of a winciy large nough to handle their crops, especially if clistiflery, as an adjunct to the manufactune of sweet win sed the port and angelies classes, be included. As a matter of fact, more money has been made by California winemakers in the manufacture of sweet wines than in any other branch of the lysmess. It is true that sweet wines, so ended, are not really wine in the true sense nor it they of the kind on which we be have that the reputation of the Livermore district will eventually rest, but their manufacture is a very literative business of great simplicity, which no winemaker can afford to disregard as an adjunct to the general business of making light wines.

There is another solution of the difficulty in the must condensing process. So far as we have heard, this process works successfully. The plant cannot be too expensive to be out of the reach of an association of grape growers. It will put their grape must in a shape in which it can be kept almost indefinitely and exported at small cost. We do not know how it sells as an article of commerce, but there is no doubt that a market can be found for it in the big cities of the East.

BEACKMAILING CHECKER

One of the most prominent Eastern trade ournals commonts on the recent order of the postal authorities as follows: Writers of abusiv or throatening postal cards, and many skulking wratches have been includeing in that practice will be wise to notice that Congress has just passed a law which fixes a fine of \$140 to \$5,000 and imflicts imprisonment of one to ten years upon every convicted rascal in that line, A principal purp - of the law, besides checking merchlackgudism, is to put a stop to the operations of vertain bad-dobt collectors, who were inding such postals together with envelopes with blackmailing threats on the outsid , in order to force payment by annivan-

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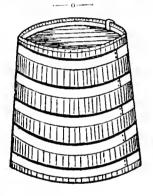
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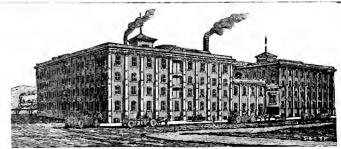
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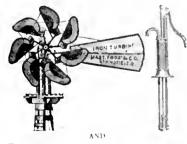
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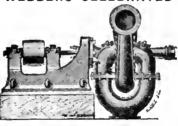
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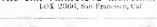
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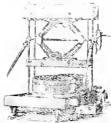
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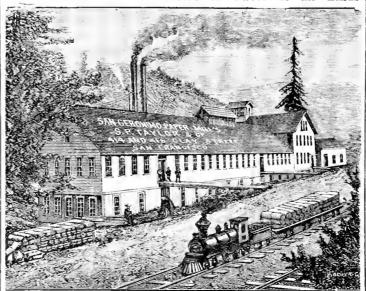
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10.45 A	A. Fast Mail for Ogden and East	5.30 A
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12.15	Los Angeles Express, for Fresno, and Los An- geles	9,30 a
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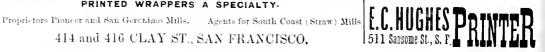
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VOL. XX, NO. 10

Devoted to Viticulture, Olive Culture, and other Productions, Manufactures and Commerce of the Pacific Coast. SAN FRANCISCO, AUGUST 17, 1888.

PRICE 15 CENTS

GRAPE GROP OF 1888

Reports Received by Clarence J. Wetmore, Secretary of the State Vitienttural Commission,

ALAMEDA COUNTY.

Report of J. L. Beard, Warm Springs,

No damage from frost. Slight damage from confure and sun burn.

Zinfandel, Mataro, Folie Blanche, Golden Challelas, Muscat and Rose Peru will produe a full crop. Verdal, Flame Tokay Cornichon and Black Ferrara a light crop, This year's crop will be double that of 1887,

Report of Capt. H. H. Lillis, Sunol.

No damage from frost: slight damage from coulure and mildew. All varieties will produce a full crop. This year's crop will be heavier than that of 1887.

Report of STOVER & BIGBIE, Pleasanton No damage from fom frost, Ten per cent damage from coulure. Three per cent loss from sun burn. Zinfandel will produca full crop. We estimate the wine production of Livermore valley at 400,000 gallons.

Report of WESTE & WEGENER, South East Livermore.

No damage from frost. Ten per cent damage from coulure; five per cent loss from sun burn. This year's crop will be fifty to seventy-five per cent more than that of 1887. We need more wincines and better prices for grapes.

Report of J. P. SMITH, (Olivina) Livermore.

No damage from frost. Very slight damage from coulure; small loss from vine hop-

Zinfandel, Colombar, Mataro, Carignan, Tannat, Bonschet, Burger, Folle Blanche a full crop. This year's crop will be onethird larger than that of 1557

NAPA COUNTY

Report of S. Keller, Calistoga.

No damage from frost. Ten per cent damage from condure. Grey Riesling ininred some by vine hopper,

Zinfandel, Colombar, Johannish rg Riesling, Tannat and Carignan a full crop. Franken Rosling, Orleans Riesling and Mataro a light crop.

Report of Cuys, Kaus, Bello Station to Calistoga.

dae not more than 100 tors; damage from soular shout 800 tons. Danings from phythexera, vine hoppers and army worm 300

Burger, Zudandel and Chasselas quite good Moral-use and Petite Syrah, good. Sanvignouvert on most places very good, whileon other places only half a crop; Ries ling very light in most places; Mission and Malyoise (thank heavens, light on account of old age, coulure, black measles and sun burn.

The crop of 1888 will be one-fifth more than that of 1887. Estimate the production of Napa county at 3,500,000 gallons and may be below that figure,

Report of A. Brun, Oakville,

No damage from frost. Thirty-three per ent damage from coulure,

Zinfandel, Black Burgundy, Semillon, Chasselas and Burger a full crop. Franken Riesling and other white grapes a light erop. This year's crop will not exceed twothirds of what we had in 1887. Estimate the wine crop of the county at 2,000,000 gallons (mostly claret).

Report of H. W. Crabb, Oakville.

No damage from frost. Twenty per cent danuge from coulure, five per cent damage from other causes, principally phylloxera, Zinfandel and Burger will produce a full erors. All other varieties affected by confure.

This year's crop will be twenty-five per cent greater than that of 1887, but twentyfive per cent less than 1886. Estimate the wine crop of the county at 3,590,000 gallons. A humid atmosphere might increase it 250,000 gallons and a dessicating one deerease it to the same extent. This valley will produce from 50 to 100 tons of table grapes. There are about two million galons of wine remaining in the cellars, but mostly held by parties who will not dispose of it for less than 20 to 25 cents per gallon. The prices of grapes will probably be lower than ever before known in the history of viticulture in the State. Unless there is a reaction in the wine market the vinevards will be neglected and converted into orchards of olives, almonds and other frmits because no one can afford to grow grapes for \$10 per ton.

Report of Gao, Hesmans, Chiles Valley. No damage from frost. Tifteen per cent damage from conlure.

Zinfandel, Sauvignon Vert, Marsanne, Damage from frost in new neighborhood | Green Hongarian, Chasselas, Mission and 500 tons. Balance of loss from frost in other Malvoisie a full crop. Franken Riesling,

Chunche Gris, Chauche Noir, Petite Pinot, Muscadelle du Bordelais, Sultana, Clairette Blanche a light crop. The crop in my vicinity will be more than double that of 1887. Estimate that the vicinity of Chines Valley will produce 5 t to 60,000 gallons of

The vines in all the vineyards show great vigor, only too much so, and it is difficult to keep them under control. The Zinfaudel, Sauvignon Vert and Marsinne in my vineyard have a coop of ten to twelve tons per acre on vines five to six years years old

Report of M. M. Ester, Napa

No damage from frost or coulus. Considerable damage from phylloxera. I have every year filled in my vineyard with resistant vines and are thus nearly even with the destructive force of the disease. Most all varieties except Franken Riesling will produce a full crop. This year's crop will be more than 1887 but less than 1886.

SONOMA COUNTY,

Report of J. C. Fisk, Fisherman's Bay. No damage from frost. One per cent damage from coulure. Not any of the varieties will produce a full crop. This year's crop will be fifty per cent less than that of 1887. We need practical men to come here and plant vineyards.

Report of L. C. Cuopius, Forestville.

No damage from frost. Twenty-five per cent loss from confure. Zinfandel and Burger a full crop. Nearly all thrifty growing varieties a light crop. Many old vines, such as the Mission and others, the buds came out stunt; I, supposed to be caused by exhaustion of parent stock or else by the severe cold weather during winter. This year's crop will be slightly heaver than that of 1887. There is a complete lack of wineries in this neighborhood. At present the hourest winery purchasing grapes is six or seven miles away.

B port of D. Cozzens, Cozzens.

No damage from frost. Zunfandel and Chasselas a full crop. Biosling a light crop. This year's crop will be five per cent greater than that of last year.

Report of A. Lancel. Occidental.

No damage from frost. From five to twenty per cent damage from coulure Zinfandels about a full crop. This year's crop will be twenty-five to thirty per cent over helf a crop. This year's erge slightly less than that of 1887. Some old vines be ever than that of 1887. less than that of 1887. Some old vines look very bad and do not grow well and should be examined by proper parties

Report of Mrs. E. A. Hood, Los Guilicos, Two per cent damage from frost, per cent damage from coulure

Zinfandel, Sauvignon and Mission a full crop. Cabernet and Pinot a light crop. This year's crop will be twenty per cent larger than that of 1887

Report of J. R. Jewell, Petaluma.

No damage from frost or coulure. The pop of 1887 was almost a failure, caused by confure. This year's crop bids fair to be from two-thirds to the e-fourths of a full erop. Zinfandelshave a full crop.

Report of J. G. HEALD, Cloverdale,

No damage from frost Very little loss from coulure, one per cent damage from mild-w. All varieties except Biesling and Felicr Szagos will produce a full crop. This year's crop will be twenty five per cent greater than that of 1887. Our prospects for quantity and quality is very encouraging, but prices are the opposite,

R port of Chys Ksyst, Cloverdale.

No damage from frost or coulure; ten per cent damage from vine hoppers and sun burn. None of the varieties will produce a full crep. This year's crop will exceed that of last year, but not so much as was at first estimated

Report of J. W. Treadwell, Santa Resa No damage from frost; very little loss from

All black grapes a full crop. White grapes a light crop. This year's crop will be three times as great as that of 1887

Report of BUCKNER BROS. A REQUES. Santa

Five per cent loss from frost, ten to fifteen per cent loss by confur-

Burger, Golden Chasselas and Missien a full crop. All others a light crop. This year's erep will be soventy-five to eighty per cent of a normal yield, and will be some what larger them that or 1887. What is most needed here is more wineries and

Report of Lay Clause & Co., Santa Rosa No damage from frost or couldre. This year's crep will be much heavier than that of 1887

Report of Jas. A. Snaw, Glen Fillen.

No damaz from frest / Zudandel a full crop, all others light. White grapes not

Report of J. H. D. MMON, tolen PHen. No Lance of our first of the report out

from phylloxera, and ten per cent loss from hot weather and fungoid diseases.

Zinfandel, Burger, Charbono, Mataro, St. Macaire, Gros Mancin, Folle Blanche, Gamai, Marsanne and Malvoise a full crop. Petite Syrah, Gutedels, Franken Riesling, Cabernet Sanvignsu, Malbeck, Chalosse, Franc Pinot, Orleans, Chauche Noir and Chauche Gris a light crop. Semillon and Sauvignon Vert a fair crop.

This year's crop will be twenty to twentyfive per cent more than that of 1887. Taking the whole out put of all wines last year, good, bad and indifferent at 15,000,000 gallous (an over estimate), I would put this year's crop (if nothing unforeseen happens) at not more than 18,000,000 gallons of marketable wine, and I fancy my estimate is high. Last year at the commencement of the vintage serious damage was done by hot weather, and this may occur this year. The more common varieties even this year seem to me to be short, and in our county the most common varieties are the most largely planted owing to the unfortunate practice of our chief grape buyers not discriminating sufficiently between a grape of the most ordinary quality for wine, and a grape producing wine of high order and undoubtedly the market price for wine has been greatly reduced by our chief wine makers not ntterly refusing to take grapes that were not fit to make good wine, only insisting on a low price. This has caused much inferior wine to be placed on the market to the great detriment of the whole industry.

Report of Eli T. Sheppard, Souoma.

Five per cent damage from frost. Eight per cent damage from coulure; the loss from phylloxera is considerable. The year's crop will be thirty-three and one-third per cent heavier than that of 1887. I estimate the wine production of the county at 2,000,000 gallons; table grape production at 750 tons. The importance of resistant vines in phylloxera districts can scarcely be over-estimated. It is the only hope of successful vine growing in this part of the State. Considerable acreage of resistants have been planted, but as yet the amount planted has not kept pace with the destruction of the vinifera by the disease and the gloomy outlook for wines prevents many persons who otherwise would replant, from doing so. It is worth remarking that in no single instance has resistant vines shown any sign of succumbing to the pest. In every case known where the vinifera has been grafted on resistant stocks the increase in production has fully justified the added labor and expense of planting resistant stocks.

Report of O. R. Rufus, Sonoma.

No damage from frost. Small damage from conlure. Considerable loss from phylloxera on hill and poor land. This year's crop will be fifty per cent heavier than that of 1887, and I estimate the crop of the county at 3,500,000 to 4,000,000 gallons, Owing to the low prices of wine grapes for the past two years, planting of new vineyards has been checked for the present in my district.

SANTA CLARA COUNTY.

Report of J. C. MERITHEW, Cupcitino. No damage from frost. Twenty per cent damage from conlure. Ziufandel a full crop. Mataro and Charbono a light crop. This year's crop will be about the same as that of 1887, and I estimate the wine production of this county at 2,000,000 gallons, but it may be less as the berries will be small and will not yield much juice; the as large as that of 1887.

damage from conline; five per cent loss grapes are twenty days earlier than usual, Report of E. Meyer, Wrights. If we had free brandy I should turu all my grapes into brandy and sweet wines, as there is enough claret on hand to last one year or more. All we want now to make this industry boom is cheap rates for freight and free brandy.

> Report of R. Heney, Jr., Mountain View. No damage from frost. Twelve per cent. damage from conlure.

Malbeck, Mataro, Cariguan, Grenache, Cabernet Sauvignon, Merlot, Verdot, Tannat, Burger and Zinfandel a full crop. This year's crop will be 33% per cent more than that of 1887. For my part, would like to see better prices for our products.

Report of Wm. Pfeffer, Gubseville.

No damage from frost. As usual Malbeck and Petite Verdot suffer from coulure. Cabernet Sauvignon, Gros Verdot, Merlot, Pfeffer's Black Burgandy, Mondense, Tannat, Crabb's Black Burgundy, Mataro, Ca rignan and Zinfandel a full crop. This year's crop will turn out about the same as that of 1887. The indications are for an carly vintage.

In times of low prices of grapes and wine it may not seem pressing work for a thorough revision of the nomenclature of our grape vines, for we now hear of vines originally coming from Italy the southern part of France and the Lord knows where. all designated as Burgundies, while, furthermore, it is a fact that California is very deficient as yet in the line of Burgundies. and it would be well to give the proper names to these so-called Burgundies.

Report of C. Freyschlag, Pioneer.

No damage from frost. Five per cent loss from conlure.

Ziufandel, Mataro, Grenache, Burgundy, Charbono, Mission, Reisling and Folle Blauche, a full crop. Black Pinot and Muscats, a light crop. This year's crop will be the same as that of 1887.

Report of Louis D. Combe, San Jose.

No damage from frost. Ten per cent. damage from coulure. Zinfandel, Grenache, Carignan, Cabernets, Malbeck, Crabb's Burgundy, Semillon, Sauvignon Vert and Burger a full erop. This year's crop will be about fifteen per cent, heavier than that of 1887 and I estimate the wine production of the county at 2,500,000 gallons.

There is a remarkable discrepancy in the prospective crops of adjoining vineyard due principally to an unaccountable notion that prevails in the growing of some varieties, One would suppose that much experimenting was still in progress and that either no rule could be laid down for pruning or that the vine grower did not wish to comply with them. The unfortunate apparent preference for cheap wines in the trade gives poor encouragement to those who have or would make superior selections of

Report of R. T. Pierce, Santa Clara.

No damage from frost or coulure. All varieties will produce a full crop. This year's crop will be thirty to forty per cent. greater than that of 1887. At least ten per per cent, more wine will be made from a ton of grapes this year than was made last year.

Report of Geo, E. Hyde, Saratoga.

No damage from frost. Some damage from coulure. Zinfandel, Mataro, Troussean and Black Burgundy a full crop. Sanvignon Vert, Carignan, Charlono and Mus cat a light crop. This year's crop is fully

No damage from frost or conlure. All varities a full crop. This year's crop will compare favorably with that of 1887.

SAN BENITO COUNTY.

Report of Wm. Palmtag, Hollister, No damage from frost or coulure. Zin-

fandel, Burger, Reisling, Pinot and table varieties a full erop. Charbono a light erop This year's crop will be double that of 1887. Twenty-five thousand gallons of wine will be made in the county and thirty

tons of table grapes will be produced. All vines are growing thriftily and are looking well.

SANTA CRUZ COUNTY.

Report of Dr. 1. A. Stewart, Santa Cruz. No damage from frost. Some damage from coulure. Do not think this year's erop will equal that of 1887, and certainly it will not excel it. Santa Cruz holds out no prospect for the prophesied 30,000,000 gallons and I know there will be no such amonut produced in the State.

From 300,000 to 350,000 gallons will be made in this county and we will raise from 15,000 to 20,000 tons of table grapes. Vignerons here are depressed beyond measare at the wine outlook and thinking of sinking the whole business in the sea. speak of wine is to make them see red and go mad

Report of Wm. Maitland, Boulder Creek. No damage from frost. But little loss from coulure. All varieties excepting Charbono will produce a full crop. This year's crop will be larger than that of 1887.

CONTRA COSTA COUNTY.

Report of E. B. Smith, Martinez,

No damage from frost, Loss on Tokay and Muscat one-half from coulnre. Two per cent, loss from sun burn. Zinfaudel, Black Burgundy, Grennche, Golden Chasselas, Burger, Petit Bousehet, Mataro and Rose Peru a full crop. This year's crop of wine grapes will be double that of 1887, while of table grapes it will be less. The county will produce 300,000 gallons of wine and 200 tous of table grapes. The planting of wine grapes has almost ceased in this county in consequence of the depressed condition of the wine market. Some have already commenced to graft their wine grapes into table grapes. Should there be no improvement in the price of wine the coming season the grafting out of wine grapes will be very general in this

Report of Dr. J. Stentzel, Martinez.

No damage from frost. One per cent. damage from coulure and one per cent. damage from insects. Zinfandel a full crop. Muscats and Flame Tokay a light crop. This year's crop will be fifteen per cent. heavier than that of 1887. The county will produce 1,000,000 gallons of wine, 800 tons of table grapes and 500 boxes raisins.

Report of John Swett, Martinez.

No damage from frost; Muscats damaged twenty per cent, by coulure. Zinfandel, Riesling and Chasselas a full crop; There will be fifty per cent, more wine grapes this year than last year, but twenty-five per cent. less Muscats and Tokays. The county will produce 150,000 gallons of wine and 300 tous table grapes. Very little extension of vineyards, and what there has been is in table grapes.

SAN JOAQUIN COUNTY.

Report of F. A. West, Stockton,

varieties will produce a full crop. This dryneas does not prevent the grapes from year's crop will be double that of ISS7. The swelling.

county will produce 400,000 gallons of wine and 550 tons of table grapes.

AMADOR COUNTY

Report of H. H. Hill, Plymouth,

No damage from frost this year. Last year's frost seems to have affected this year's crop about one per cent. Mission vines will produce a full crop. This year's crop about the same as last year. My vines produce on an average five tons per acre.

MERCED COUNTY.

Report of G. E. Ladd, Merced.

No damage from frost or coulure; some damage from viue hopper and sun born Prousseau, West's White Prolific, Verdala Mataro, Cariguan, Blaue Elhling and Colombar a full crop. Zinfandel, Charhone, Polle Blanche, Grenache, Muscat, Black Ferrara and Tokay a light crop.

There will be an increase in this year's crop over that of 1887. The county will produce 30,000 gallons of wine and 150 tons of table grapes.

FRESNO COUNTY.

Report of M. Denicke, Fresno.

No damage from frost; no damage from condure to wine grapes, but some to Muscats. The more sulphur the less coulars. The viue hopper does some damage to Muscats and wine varieties

All varieties will produce a full crop. This year's crop will be somewhat larger than that of 1887. The county will produce 2,230,000 gallons of wine and 420,000 boxes of raisins. No wine grape vineyards have heen planted here for the past six, I have tried the wire screen hopper trap of different sizes with effect.

SAN LUIS OBISPO COUNTY.

Report of Dr. W. W. Hays, San Miguel. No damage from frost or coulure. All varieties will produce a full crop. This year's crop will be one-third more than that of 1887.

Report of H. M. Maxwell, San Miguel, No damage from frost. All varieties will produce a full crop. This year's crop will he twenty-five per cent. greater than that of 1887. But little wine made as yet in

SAN BERNARDINO COUNTY.

Report of J. E. Cotter, Riverside.

No damage from frost and but little damage by coulure. Muscats will produce a full crop. This year's crop will be twenty per cent, larger than that of 1887. The county will produce upwards of 225,000 boxes of raisius.

SOLANO COUNTY.

Report of Dr. Alexauder, Batavia.

No damage from frost or coulure. Muscat, Zinfandel and Tokay a full crop; Miss sion a light crop. This year's crop promises to be much heavier than that of 1887.

It is my opinion that unless a price of \$20 per top can be maintained for grapes there will soon be no grape vines grown in Solano county. Some sixty acres have already been uprooted in this vicinity and nuless winemakers and dealers can pay better prices for grapes than have been ruling for the past two years, they will soon have to raise their own grapes or go ont of the business.

YOLO CCHNTY

Report of Webster Trest, Davisville.

No damage from frost or conlure. Muscat Tokay and Emperor a full crop. This No damage from trost or coulure. All year's crop will be double that of 1877 if

LAKE COUNTY.

Report of A. E. Kunst, Lakeport.

No damage from frost, fifteen per cent. loss from vine hoppers. Zinfandel, Sinvignon Vert and Burgundy a full crop. Riesling and Chasselas a light crop. This year's crop will be thirty-three and onethird pire at greater than that of 1887. The county will produce 75,000 gallons of wine, and twent-five tous of table grapes,

Report of J. Roimers, Highlands.

No damage from frost or couldre; all varieties will produce a full crop. This year's crop is four times as larg as that of

PLACER COUNTY

R port of E. W. Mashin, Loomis.

No damage from frost or coulars; small damage from vine hoppins. This y u's crop will be thirty per cent, heavier than that of 1887.

Placer county is more distiguished for table grapes than for wine. Ih with grapes are sold to Sacramento and Napa winemakers. About 50,000 gallons will be mad in the county.

B port of M. Lobner, Colfax.

No damage from frost or couldret somvarieties slightly daming it by end in in Muscat, Rose Peru, Tokiy, Mission, Ziufandel, Chasselas, Riesling a full crop. Purple Damaseus a light crop. This year's crop will be about the same as that of 1887. Vines are looking healthy. No winery here yet. Mostly table grapes grown. No one as yet in the raisin business.

R port of W G. HUBLEY, Colfax.

No damage from frost this year, but the effect of the May frost of 1887 is apparent. five per cent. damage from coulure on Muscat and Purple Damascus, ten per cent. loss on Tokays and Rose Peru from black knot caused by May frost of 1887. Five per cent, loss on Tokays by sunbarn, caused by the vine-hopper destroying the lower leaves early in the season. Zinfandels, Black Moroeco, and Mission a full crop.

Tokay, Muscat, Purple Damascus, Emperor and Rose Peru a light crop. This year's crop will be four times as much as that of 1887 owing to new vincyards coming into bearing. Vineyards planted to table and wine grapes in the proportion of thre. to two. The acreage planted to vines in 1888 was small, owing to parties paying of the above theses. Such discussion to be more attention to orchards.

CALAVERAS COUNTY.

Report of C. Gardella, Mokelumne Hill. No damage from frost. Twenty five per cent, damage from confure on Mission and Chasselas; all foreign varieties a full crop-This year's crop will be one-third more than that of 1887. The County will produce 300,000 gallons of wine, 100 tons of table grapes, and 600 boxes of raisins

SUMMARY

From the foregoing reports I am able to make the following estimates of the vine to care for all the issues. production that will be made this year in the different counties:

Napa	3.500.000
Cambra control throat	
Sonoma	2,,50,000
Alameda	1, 190,000
Contra Costa	520,000
Santa Clara	2,500,000
Santa 1 70*	
Kan Joaquiti	1005,000
Merced	Зодиме.
Fresio	3.300'000
Los Angeles and South	
Sacramento and North	- 2,5600,000
Other Counties	1,500 000
Total	

tion gallons will be distilled, leaving from other substances

sixteen to seventeen million gallons of sweet BLET STGAR IN NEW ZEALAND and dry wines. The total production as given above may be lessened considerably if the present hot weather keeps up. A great many parties have signified their intention of diving their wine grapes. How much this will reduce the wine yield I am unable to say. The early ripening of the grapes will facilitate the drying of them and no doubt a great many car loads will be dried, The must-cond using machine at Goyserville, Sonoma County, will also be run again this year which will help to reduce the wine yield of Sonoma County.

From the reports received it will be seen that white wire graps will be short, while r d wine grapes will be a good crop, especisily Zinfandels. Of table grapes. Muscuts and Tokays will not be a heavy crop. The reports concerning the raisin production are not full, but from what were received I would place the raising reduction at 1,000,-00.1 to 1,100,000 bexis.

CLARENCE J. WETMORE, S cretary Viticultural Commission. Sim Frito So, Aug. 7, 1888.

PROBEBILIONISTS CHALLENGED.

LINTOR MERCHANT: I should be glad to ace a challenge issued to the total abstain rs, and a quiet, but strong discussion of the wine question involving the scientific, historic and social or scriptional aspects. I think such a discussion would cause a large sale of the "Merchant" throughout ad-California and the States. I would gladly take part in it, but would prefer that my name should be a secret, writing as N.S.G.W You have already given some first-rate artieles from scientific and historical points of view, but to draw public attention, it is necessary to provoke oppositive and full and kindly discussion. I suggest the following challenge:

1. That wine has been in the past history of the world the mark of civilization and of godliness.

2. That "the absence" of wine in past der and anarchy.

3. That wine is necessary to the health of man's body.

4. That wine is necessary to the saving of man's soul.

Every person in the United States is hereby challenged to disprove either or all confined to the columns of the MERCHANT. N. S. G. W.

It would be as well to confer with Mr. Wetmore, whose first article I approve, and also to sketch out beforehand the grounds upon which these four theses rest so that there may be no hesitation or mistake in confounding the enemies of wine.

Dr. Shepperd of Santa Rosa, the Episcopal Minister there, in quite enthusiastic on these grounds and has already published on these points, but no doubt in our circle of friends you have some who are well able

I saw at the Central M. E. Church in San Francisco there was a lecture by a Prof. of Chemistry against alcohol, it was very desingenuous and mixed all the alcohols into confusion, the degrees of saturation of the carbon and the totally different character of the alcohols being purpos by hidden You want a good chemist to draw the disfunctions of the alcohols and their utterly Of this amount at least four to five mil- sub-agent working rest and it is a mere on gallons will be steen a different effects on the human frame, especsub-agent working with and through many

The following article has been furnished to the Anckland Grande by a gentleman who has given a large amount of attention to the subject

"Before any capital is invested in the growth of sugar-beets in New Zealand, or in providing plant for the manufacture of sugar therefrom, it will be well to comparthe conditions, which privail in this colony with those of Germany, and to see from this comparison what chance of speces people who put their money in this enter prise would have.

"First, as to the land, there seems reason to believe that soil of sufficient richuess to to be found in New Zealand, and for the purpose of calculation we can assume that such will be attainable in accessible locali ties, and that in one such district there will be enough farmers residing within a reasonable distance of the site for the factory to ensure the delivery of the beets at a moderate rate of carriage, merely remembering that for a factory to pro ince, say, 1500 tons sugar, there will be needed 3,000 acres of land on which losts can be grown. Now, on these assumptions, at what price can the beets be grown and delivered? In Germany, where the land is most heavily and scientifically manured, where the rotation both of crops and mannes is compulsory on the growers for instance farm-yard manure may only be used after the best crop is taken off, and two crops of grain or other produce must follow that of the best the cost of the lasts delivered at the factory is about 16s per ton, and the price paid up till 1886 was about 20s. A lower rate is given now, but in most cases the farmers have a share in the factory, and the ruice of their beets is determined by the general success of the campaign. When the higher price ruled, the land was worth perhaps from £50 to £70 per acre, and the rent varied from £2.5s to £3.10s per acre. In New Zealand, on the other hand, such choice land could possibly be had for £10 history has been the mark of rapine, mur- to £15 per acre if thoroughly stumped and cleaned, or say from 12s to 20s per acre rent, and in this respect the farmers bere would have an initial advantage. This would, however, soon disappear, for if we allow from the 16s taken as representing the cost in Gurmany 3s to 5s per ton for rent or interest, we have 11s to 13s as the expenditure on labor, seed and manure, etc. Now in Germany the laborers who tend the bootsfield (to a large extent women) receive from 11, 1 to 2d per hour; in New Zealand such laborers would get in the shape of pay and keep from 4d to 6d per hour, and as mannre, seed, etc., are all much more expensive in this colony, the growth of beets at anything like the German price seems to be a sheer impossibility. But let us assume that beets can be delivered at the factors at 25s per ton, and see what will then be the east of the sugar.

"The working expenses of a factory in Germany run from 7s per ton beets to a very much higher rate, and mest of the factories have chiap fuel, while all have at ample labor force always available at a cost of 2d to 3d per hour. In New Z aland fuel will always be dear, and wages are not likely for some time to come to be less than 6d per hour (20s to 22s per work and 8s to 10s for boar Land lodgings, for sugar factory work, so that the working expenses of any factory started in New Zealand would surely (even if full work were maintained enmount to 12s to 15s per ton best, and the latter figure would be the nearest to the actual dispurposes

expenses. This is irrespective of any interest or provision for sinking fund, but melades the cost of maintaining the plant m running or br. and the salarbs of the tuff, etc. during the idle s ason. The yield of sugar from the boots, if the product be made into an article saleable to the trade, will not exceed nine per cent of the weight of the beets, and will probably be much less, but take nine per cent, as the lessis, or one ten sugar for II tons of beet, and the cost of this will be 25 plus 12 at 15 times 11 equals £20.7s, at £22 per ton. This is the nett cash out of posket, and to it must be added the interest on the capital invested in the factory. Now in Germany, a factory to make 1500 tons sugar would rost over £40,000, in New Zealand the expenditure would be £60,000, and on this amount must be allowed 6 per cent, interest, and 4 per cent, for depreciation, which is about the rate set aside by the German fabricants. These charges amount to \$6000, or say £4 per ton on the sugar, and any one familiar with the prices now ruling in New Zeal and will be able to decide for himself whether, after thus providing for the capitil sunk in the business, there will be any profits left to be shired I among the share-

"In writing the for-going we have thought it well to deal with broad facts, and not attempt to go into minute particulars, and we have not therefore referred to two points about best cultivation which carry much weight in Germany. These are the use of the exhausted beets for cattle feeding, and the improvement in the returns from the land used for the bests by the intense culture required for this crop. It may, however, now be said about the first of these that in New Zealand it is much cheaper to feed the stock on grass than on Ahansted beets, and the present price of meat does not offer any inducement to start hand or stall feeding, and that as to the second, while wheat is selling at say 288 a quarter in England, the advantages of high cultivation are not so apparent as they would be if higher prices prevailed.

In conclusion, we may anticipate any demands for proof of what has here been put forth, by saying that any person who doubts the correctness of the foregoing statements had better inquire about the last cultivation in the United States, and he will find that ther, with a Protective daty on sugar of 49 per ton, with cheaper capital and labor than are available in these colonies, the few attempts that have been made to acclimatize this industry bave proved partial or complete failures, although money has been spent freely, and the climate is, we belt ve, better for the ripening of beets than that of New Zealand.

Moreover, the American refiners are a very wealthy and powerful body, and would surely have given strong support to the industry if it had appeared to them to have had any chance of success

Water in London.

The average damy supply of water delivred from the Thann's to Landon consumers during last May was 80 338 332 pallons, from the Lea. 57 047,442 gallons, from springs and wells, 19,116,275 gallons, from ponds at Hampstead and Highgate, 2,023 gallons. The list is used for non-domestic purposes only. The duly total was, thereforce 156 544722 greature for a population aggregating 7-456 587 in president in faily consimption per heal of 28 is addons for

THE VINE AND ITS FRUIT

[Continued from page 132.]

In continuation of the subject in the Vinewardist, Dr. I. H. McCarty says:

The grape vine is said to have grown so large in some instances, and of so compact a fibre, as to have been employed in the manufacture of furniture. But this must have been to a very limited extent. It certainly never was cultivated as a wood simply; if so used it must have been merely neidental. In all ages of the world and in all lands it has been grown for its fruit alone. It has furnished that very delicate article, the raisin. Raisins are nothing more nor less than dried grapes of certain choice varieties, and they have been in use for ages. As long ago as when the Israelities were emerging out of their bondage they used raisins. In the book of Nchehigh, 6th Chap., 3d verse, it is written of the Nazarite: "He shall separate himself from wine and strong drink, and shall drink no vinegar of wine, or vinegar of strong drink, neither shall be drink any liquor of grapes, nor eat moist grapes, or dried," that is, raisins. They are named in the book of Sumuel: "Then Abigail made haste, and took two hundred loaves, and two bottles of wine, and five sheep ready dressed, and five measures of parched corn, and a hundred clusters of raisios, and two hundred cakes of figs, and laid them on asses." Raisins have been an article of commerce in France, Spain and Portugal, as well as in Asia Minor. The best varieties come to us from the provinces of Malaga, Valencia and Alicante in Spain. A species of raisin is also produced in the islands of the Grecian Archipelago, which are large seeded and dark colored. Many other sections of the globe export raisins to the markets of the world. The business is one of magnitude. This fruit, to the value of five million dollars a year, is imported into the British isles. Our own country imported from these foreign land in 1870 eleven thousand tons. The books tell us of the various modes of preparing them, but in as much as we cannot in this latitude go into the business, the subject may here he dismissed,

We have seen in these papers how universally the vine has been cultivated among the nations; and how much use has been made of its fruit in the manufacture of wine among both Jews and Gentiles. Nobody questions the fact that fermented wine was in use as a beverage in Greece. Rome, Egypt and Juden. The Bible is full of references to wine drinking, as well as to the sin of drunkeness caused thereby among the Jews. The practice of using strong drink, with its sad consequences, was always condemned in unmeasured lan-

The juice of the grape is called wine, no matter whether fermented or otherwise The works "wine and strong drink" are frequently coupled together in the same sentence. So there must have been two sorts in use. The juice of the grape was expressed from the ripened clusters in varions ways; sometimes by simply squeezing the herries into the drinking cup with the naked hand, as in the case of the chief butler and Pharoh. In other instances it was done by wrapping the berries in a cloth of loose texture and wringing out the juice, This is evidently alluded to by David in the 75th Psalm: "For in the hand of the

wicked of the earth shall wring them out and drink them." But the general method was to use the wine press when the vintage was gathered and the crop was to be converted into wine. The ancient wine press consisted of two receptacles. The one was large, in to which the fruit, fresh from the vines, was placed. Even here we are minutely informed by the prophet Jeremuch that in the grape harvest, the people carried the fruit in baskets. "Thus saith the Lord of hosts, "They shall thoroughly gleau the remnant of Israel as a vine; turn back thy hand as a grape-gatherer into the baskets." Directly beneath this first receptacle was a second one, into which the juice ran, especially that which was pressed out by the natural weight of the mass of fruit. This ran through a strainer into the lower vat, being the gleukos of the Greeks, mustura of the Romans, and the "sweet wine" of the Jews, sometimes called the "tear," The wine is referred to, in the book of Samuel: "And Eli said unto her, How long wilt thou be drunken? put away thy wine from thee, And Hannah answered and said, No, my Lord, I am a woman of a sorrowful spirit; I have drunk neither wine nor strong drink, but have poured out my soul before the Lord?' and also in the book of the Acts, where we read in the Chap., and 13th verse, Others mocking said, "These men are full of new wine." When fermented this aleukos, that is, new wine, has a powerful intoxicant,

Among the Jewish people this was called "the first fruit of the vintage," and some of it was required to be presented to Jehovah as a thank offering. "Thou shalt not delay to offer the first of thy ripe fruits, and of thy liquors; the first-born of thy sons thou shalt give unto me." After this first dripping was gathered the work of "treading" began. This is also frequently referred to as a mode of wine making, and is sometimes used as a figure of speech,

"Which make oil within their walls, and tread their winepresses, and suffer thirst.'

"In those days saw I in Judah some treading winepresses on the Sabbath; and bringing in sheaves, and lading asses; as also wine, grapes, and figs, and all manner of burdens, which they brought into Jerusaleam on the Sabbath day; and 1 testified against them in the day wherein they sold victuals."

The treading of the grapes in the vat generally left the legs and garments dyed red with the juice, which also is mentioned especially as a figure of the suffering and death of Christ, Isaiah wrote:

"Who is this that cometh from Edom with dyed garment from Bozrah? this that is glorious in his apparel, traveling in the greatness of his strength? I that speak in righteonsness, mighty to save,

"Wherefore art thou red in thine apparel, and thy garments like him that treadeth in the winevat?"

[To be continued.]

ATSTRALIAN WINE NOTES.

The vintage at Mr. T. Hardy's Bankside vineyards is finished, and has proved a very good one; the weather throughout having been exceptionably favorable, both for wine making and fruit drying. The Shiraz grape during last month developed, owing to the fine weather, an extraordinary degree of saccharine. The yield of grapes in many of the vineyards purchased was

over any former vintage; and under the supervision of Mr. G. B. Hardy the whole of the wine was perfectly fermented, and will all be fit for the English market. M'Luren Vale, under the management of Mr. T. G. Kelly, some 40,000 gallons of wine were made, largely from grapes purchased from the small growers in that neighborhood. At Langhorne's Creek the yield of Mr. Hector's vineyard was purchased by Mr. Hardy, and made into wine for him by Mr. F. Potts, junior, and about 10,000 gallons will be the result. Lorimer', Woodside, about 3,000 gallons of superior light wines were made, and about 9,500 gallons at Morphett Vale wholly from purchased grapes. Altogether, about 140,-000 gallons will be this season's total—a very considerable advance over any former vintage. The raisin crop was a fairly good one, and the quality suferior to that of any former year both for size and color. The current crop was a light one, owing to the blossom not setting well and the ravages of the sparrows, which appear to be particularly fond of this variety of grape.

SHIPPING GRAPES EAST.

Mr. A. J. Wiener is busily engaged in trying to so arrange matters that the small fruit growers in this city can take advantage of the fast time and low rates of freight given to eastern points on green fruits in ear load lots. It is well-known that the California fruit union is now running a fruit train from Sacramento to Chicago daily. This fruit is consigned to the union in Chicago and by them sold at auction. The railroad company, some time ago, issued a notice to all fruit growers stating that if any orchardist or vineyardist had a carload of green fruit to go East, it would be taken in this train at the same rates noid by the union. The trouble has been that there are very few fruit men in the State who can furnish a carload of green fruit alone. The prices realized East for grapes, etc., are troble the prices paid here, and by Mr. Weiner's plan all ean take advantage of the Eastern market.

A meeting of the fruit growers and vinevardists will be held in the Board of Trade rooms for the purpose of arranging matters so that a number of fruit growers will deliver their finit in this city on the same day. In this way a carload of fruit can be collected and the car will then be taken on a passenger train to Sacramento, and there placed in the train for Chicago. When it arrives at its destination, the fruit can either be consigned to the union there to be sold at auction or delivered to private firms as the shippers may desire. Let every fruit grower and vineyardist attend the meeting Monday night.

A New Sugar Cane.

For about 100 years, says the London Times, most of the sugar in the West 1ndies has been obtained from the Otahheite cane, originally brought from the Pacific Islands by Captain Bligh in His Majesty's ships in 1796. Latterly strenous efforts have been made to introduce new canes, in the hope that they would prove richer in yield of sugar. In one instance we learn that a cane introduced by the present assistant of Kew Gardens when in charge of the Botanical Gardens at Jamaica has supplanted the Ohaheite cane and proved most productive. A planter at St. Kitts the 75th Psalm: "For in the hand of the in many of the vineyards purchased was Lord there is a cup, and the wine is red: it is full of mixture; and he poureth out of the same; but the dregs thereof, all the is yield gave an increase of 10,000 gallons." In most productive. A planter at St. Kitts says the new cane, which he has called the Jamaican, is a "marvelous cane," He adds that "it stands dry weather well and the same; but the dregs thereof, all the yield gave an increase of 10,000 gallons."

CAPT. 1. N. Burritt, editor of the Washington, D. C. Sunday Herald, who, at the time of the anti bogus wine hill fight before Congress, proved one of the staunchest friends of the grape growers, still keeps alive the righteous claim of protection against adulteration of legitimate wine as an article of alimentation, while the producing community seems to lifferent to the cause. The shock received lately through influences contrary to the interests of California viticulture by the murder in Congress of the Sweet Wine Bill, of course checks energy and hopefulness on the part of the viticulturists. In his influential paper Capt Burritt lately made the following remarks:

When Congress passed the hill taxing oleomargarine there were many who doubtea the constitutional power to regulate, by means of the taxing power, adulterations of food products or frauds upon the public in the shape of compounds offered for sale under false pretenses, and, contrary to expectation, quite a large revenue arose from the tax. Now no one doubts the wisdom of the act, and the power to pass it is scarcely disputed. The act was not effectual to destroy the oleo interests, but it did make it possible for the public to know, with reasonable certainty, what they were buying. The constitutional power now being admitted, it is certainly the data of Congress to provide sgainst the sale of any adulterated foods, wines, or liquors. But it should go further, and prevent the importation of such articles, except under such guarantees as would enable the purchaser of foreign adulterated foods and wines to know exactly what he was buying. This is legislation for the benefit of the whole people that ought to be enacted at once.

SOIL FOR GRAPES.

Do not be afraid of rich soil for grapevines. They are gross feeders and we have found that a liberal top dressing of wellrotted chip dirt, on naturally strong, rich prairie soil, has grown our finest crop of grapea. Grape vines are especially fond of animal refuse. If bones, heads or other butchers' offal, are buried two, three or four feet from a vine, which has been planted two or more years, and is in good condition, the roots will soon take possession. We have always put this advice in practice by burying all small animals which die (and of which farmers have more or less every year), in our vineyard, and our neighbors have always expressed surprise at the luxuriant growth of our vines, and crops of fruit .- Ex.

INK TABLETS.

The demand for these or for ink powder is rather limited, though the form is extremely handy for carrying along on a journey, especially on routes where accommodations have to be mainly provided by the traveler himself. Two recipes for preparing such tablets are here given:

- 1. Extract of logwood, 500 parts; alum, 10 parts; gum arabic, 10 parts; neutral chromate of potassium, 1 part. Dissolve the salts in 500 parts of water, add the extract of logwood and gum arabic and concentrate the mixture to the consistence of an extract. Then pour the mass out either into molds or into a flat bottomed dish and cut it in pieces of suitable size, which may he enclosed in boxes or other receptacles.
- 2. Extract of logwood 100 parts; gum arabic, 10 parts; indigo carmine, 5 parts; neutral chromate of potassium, 1 part: glycerin, 10 parts; water, q. a. Proceed as in the preceding formula,

FERMENTATION IN FRESNO.

John H. Wheler Esp.,

Chief Executive Vitigaltural Officer

DEAR Str.: I have made studies upon fermentation and vinification the last three years in Fresno county, and as it might be very useful to the many, I have the pleasure to write the best mode I have employed and with success, for the making of a fine red dry wine, a little more of the Burgundy type than that called generally Claret. This method of fermentation never failed, and is not very difficult as you will read;

I must first give as a rule, that the also bolic (vinous) ferment shows itself from 60° F to 75° F. Above 75° F lactic ferment begins to appear. At 85° F it is full and taste its fruits, and over again 90° F all the series of other ferments begin to take possession of the mass of liquid and kill the first

This rule is, in a few words, a very important one and ought to be in the head of all and every person intending to make wine and desirons of snecess but it is generally lost sight of by the majority of the wine makers.

Come next the temps rature of fermenting rooms, which is the next important point. In order to be always must r of the mass, one must act upon it, that is to say upon the "grapes" one must rule fermentation at its starting point when the grapes crushed are placed in the tank, and not when the must boils already.

Have the graps spicked as fresh as possible in the morning, do not let them be exposed in the full sun for all day, have them covered by some fresh leaves or any other mode. and then remember that as soon as the grapes are thrown into the tank it will be very short time before it rises in degrees, It is therefore important to have your grapes cooled to the 60° or 65° if you wish to have a good and steady fermentation, If the fermenting tank is at 77° F, with a prospect of getting higher by itself keep a draft and obtain a temperature of 75 F

If in the shade the temperature, outside, is of 85 ° F and above, you must keep the fermenting room closed. Take care to wash your fermenting tank with fresh water just b fore placing the load in it - water at 60 F is the best, and see that the "must" is not over.

There is a very important point generally to be observed, it is to see that the "must" be always below 12° alcohol, and if it passes over that degree it must be reduced with fresh water, till reaching just below 12°, because the greater is the density the more deheate is the fermentation, the more it becomes difficult and one risks not to have it "pass through," In Fresno it is of daily occurrence, on account of heat and dryness of atmosphere. Now, in order to avoid a too prompt fermentation to set in, in the top and secondary ferm-intation, maintain the "lat" always submerged. It is a very easy way with re-forated bottom. Then let fermentation set in; as soon as it will be well started at the top, draw out from the bottom and throw it over the top. That operation has the advantage to insure a normal progress of the alcoholic fermentation in the whole of the liquid in the tank, and if not made as described, the alcoholic fermentation not yet begun in the lower part of the tank, be terminated in the higher part of it and then would continue with a secondary fermentation, acetic or others. As you see I have not used much of the foulage and I have found that that process makes a jelly of the "must" and pre- chapter of proverbs the loveliest picture five cents per glass for what he may drink, M cm, of 2022 Hilly or Place

vent a great deal the extloniegas to escape. But if one follows the rule I have just given to you, fermentation is over in eight days and in a hountiful condition.

After you take the wine "must" from the fermenting tank, place it in as small tanks as possible and in a cellar the same temperature as the fermenting room. The small tank helps the wine to clear and the second fermentation is generally over in about twenty days, then it can be drawn into large tanks of 2,000 or 3,000 gallens without any danger, and in a cellar of a lagher temperature in order to mature it earlier. Win charde in this way is fine and will preserve well.

Yours truly.

CAPT. J. CH. DE ST. HUBERT. Fresno, August 4, 1888.

TREADWELL ON PROHIBITION.

Ounmanam verum redentum dieere, anid vetal? You need not always pull a long face when you want to tell the truth, so thought Herace and he was right. Wine was meant to cheer the heart of man and the heart of God, so Holy writ says, and wine makes people cheerful unless they should happen to be like the Probabitionists cursing the growers, cursing the makers and cursing the good gifts of God. A viticultural board without samples of wines must be like a plum pudding with the plums left out, and when the State cellar is established you could invite the ladies of the W. C. T. U. and Mr. St. John to biste Californian nectar, so that they mucht be reformed and not class good wine with sour mash whiskey. I am afraid though, that these people are so full of cursing and latterness, that it would happen like it did to a friend of mine. He met a Prohibitionist pouring out the rials of his wrath on wine, and said "Charlie, I hope you don't go into your wife's dairy," "Why's that," said Charlie, Oh! (said my friend) because your temper is bad enough to sour all the cream, and I fear there is enough bad temper in the outrageous Prohibitronists to sour a whole cellar of good wine.

After all those Probabilionists are rather mean, You read all about the original Lord's supper. How several men had to go before hand into the city and order the roast lamb and the wine, and make ready a banquet for thirteen people. As it was spring time, the wine, even if young, must have been well fermented, and racked at least three times.

Nowadays you get an invitation from the Prohibitionist to attend the Lord's supper. but when you got there you don't see the roast lamb, nor even a banquet table made ready, but a lot of doleful looking people covering their faces and minching a wee bit of dry bread (no gravy mind you, the size of the end of my thumb, and then a sipjust a sip of what? Blackborry juice, sweetened with alreose, and closed with as much spirit as keeps down the fermentation and prevents it from becoming wine. Paul complains that the early church members drank so much wine that they got drunk at the Lord's table, but these blessed Prohibitionists in vergive a poor saint, the chance,

To such a mockery of the real good home by social banquet of the Lord we have been reduced by Prohibition. Restore the original banquet with good wholesome champague white or red wine, and the churches will not be so empty as they are.

One word of fatherly advice to the W. C. T. U. of America. There is in the last

that ever greeted the eyes of an honest and very often the same person will drink man. It is the picture of the virtuous two or three glasses. At the close of the woman, the queen of home, whose pare is grape season they usually grand and press far above rubies. Read there, " She plants large quantities of grapes, pamerically Cona rimpard," Instead of raying against wine, let the women of America join them selves into a true W. C. T. U., that is to say Wine Cherishing and Tastooy I view," and drunk nness from that day will begin to the out in this union. Down with Prombation

THE GRAPE CERE

Referring to the virtue of the new grapcure the Farm and Vinemand says Much interest has been excited in medical circles and the public mind, for years just, in regard to the alleged curative qualities of the grape, and its uffleacy in a large class of stubborn and chronic discuses, grape cure, as it is properly called, has been in vogue for a considerable length of time in France and Germany, and the method of treatment has been to let the patrent cat all the ripe grapes daily that he or she desired in vintage time, and many remarkable cures are regarded as having annually occurred.

The grape cure has become a well established fact in America as well as in Germany, and every day is developing new truths in support of its wonderful efficacy. The eminent Irving C. Ross, M. D., speaking from personal experience, says of it

. Some years ago, on arriving at Cadiz, after a long voyage and the monotonous diet of a sailing ship, and my system being greatly reduced, I determined to try for a time a diet consisting almost exclusively of grapes. The result was rapid reestablishment of all the bodily functions and a feeling of more than ordinary strength and agality. I was prompted while in San Francisco, Cal., to resort to the grape cure for the second time, the result being satisfactory. I recommended the cure to several persons who were much run down from over-work and had diet and I had the satissaction to see a rapid gain both in weight and appetite."

It having been sufficiently demonstrated that the methodical and rational use of the grape juice breaks up all habits of nutrition, rapidly reconstructs the blood, and exercises a salutary influence upon the nervous system, it follows as a rational sequence that the grape care would be the natural and most efficacious remedy for many persons in our large cities who, in conscipunce of extreme heat and improperly cooked food, suffer from conjusted livers and intestinal catairh, and who delude themselves with the popular fallacy that malaria is the source of all their tronbles, Overworked clerks and newspaper men, who keep late hours and live on boarding house fare, may derive from the vegetable milk of the luserous and inoffensive graps a rational means by which to re-establish these physiological conditions so essential to clear thought and a proper discharge of their wearisome duties, and which is alone worth living

For some years past a New York city firm has sold joire grape, juice at five centa glass or 25 cents a bottle, that can be carried to invalids and old people at their homes. The lusiness of these firm during the grape season has been simply immene-As long as fresh grapes can be had, small hand presses upon the counter are used for expressing the juice, each person selecting his own grapes, it he chooses, from any of the different varieties on hand, and preving

cords, the pince from which is filtered or stronged and joil away in barrols, in a temp rature always below 40 , where it will remain fresh and sweet until grapes come igain, as fermentation cannot take place in so low a temperature.

This is probably but the beginning of the use of "unformented grape pure" in this country, and the demand for granes for this purpose, and as a healthful beverage for the people in general, added to the municipe quantity to be used in making untermented wine by evaporation, that will keep in its present state for years, in all chinates, and can be shipped chearly all over the world, will render the overproduction of grapes in the United States quite improbable, and tond to make grape growing not only rapidly progressive in quantity, but render the vocation premanent, prosperous and profitable,

GRAPE AND WINE CHAT.

To Published At Co. Washington

You sent me a Mahusey from the island of Madeira, bottled in 1811 a sample of a generous, sweet wine that has been inprisoned in the bottle for seventy-seven years bland and luscious to the palate, oily, sticky, not bright, Of course not: after very likely for more than two gener. ations not having been touched, decanting now will hardly result in obtaining in the receiving vessel a clear liquid. Its perfume is rich and lasting. Twenty-four hours after tasting the wine, the empty glass yet gives off its otherous fragrance. There is nothing decrepit in the wine. Balmy sweetness, fell vinosity, perfect amalgam of it with the alcoholic show a good veteran wine

But on that p well kept for such an almormal period as is pretended, seventy-five years have been wasted. In 1813 it would have been what it is now, minus the now thoroughly intimate amalgam of its elements. Matured four or five years in the wood seventy-five years ago it would have been as pleasant, round and rich as it is now, or nearly so. Perhaps in its youth it was even more delicious,

Only by losing nitrogeneous and other matters, expelled through the pores of the wood and precipitated in the cask by the action of oxygen, wine (and distillates) matures. The action of nature in the wine inclosed in a bottle and deprived of the access of atmospheric air is beneficial as to a degree of mellowing it, but the precipitate which is sure to adhere to bottom and walls of the bettle has to be extracted to insuraperfect keeping of the wine. Every five, or say ton yours, according to the nature of a luch-grade wine, the racking and rebottling it, as well as renewal of defective corks, is imporative. A grand dry red wine may reach its greatest perfection in a dozen years. It would be useless to force its existence for a longer period. But when a superior dry white wine -a Port, or Sherry, or Madeira is to be preserved over the half century, the rule of racking it periodically, and also the renewing of the part taken away from the bottle, or the refreshing of the aged wine by the addition of an inalogous wine of a younger vintage, must not be neglected. The lick of care has not be neglected. The lick of care has caused many sad disappeantments to the heirs of him who left them treasures of this kind. 1. Poinsporte.

Irrow Jan. Cal., August, 188

WINES.

DY JOHANN CARL LEUCHS.

Scharlachberg, near Bingen, produces white wines which command a good price; they do not, however, uttain so high a fignre as the choice Rheingans, as they lack the strength and bouquet of the latter sort. In good years, fifteen hundred florins per barrel are paid for the very best Scharlachberger wine.

Nierstein has be long famous for its wine, which is celebrated for its good and wholesome qualities. A great quantity of it is made, and the best Niersteiner fetches one thousand florins per pipe.

The wines of Bodenheim and Laubenheim are in general twenty per cent lighter in quality than the above, and they are thus proportionately cheaper. There are some exceptions, however; nor is it surising that, throughout the genuine wine districts of th hine, some superior sorts should be found; and more especially will this be the case when once it becomes a general rule to make their wines only from choice and very ripe fruits, and to divest the berries of every particle of green stalk. Already has this method been practiced years past by the more intelligent winegrowers, and their success has set a good example, inasmuch as by adopting this plan the advantage is gained of its not heing found necessary to lay up the wine in harrels for years in order to render it mild; but, on the contrary, it soon becomes fit for consumption, and, finding a speedy market, there is a quick return of the capital invested, which is not suffered to lie idle.

Formerly it was customary to draw the wine off into large hogsheads, but now they select their different kinds of grape for their several sorts of wine, and draw it off into small-sized barrels.

The wines from the left bank of the Rhine possess, generally, less body than those of the right, but they are finer in quality, contain more alcohol, and have a most excellent bouquet. Rheinhessen must therein the spirit which has been transports from Worms to Bingen several kinds of very good wine; e. y., in the year 1818, fifty thousand pipes; in 1819, ninety sides, the tubes are removed, and a bung thousand half pipes.

We shall here enumerate the best wine districts, and describe the various methods of making wine therein, founded upon Brouner's system.

Karlebach. Here the wine is made in the same manner as at Hardt, with the difference only that the grapes are mashed with pounders instead of in the tread-tank with the feet; and in many instances the the wine-makers crush the fruit with rollers for the sake of expedition, as one man, in the same time, will crush with the rollers as much fruit as three men can mash with the pounders.

Worms produces the Liebfrauenmilch, and also those wines of somewhat lighter quality-the Katerloch and Luguisland, These are the most celebrated wines. The wine-presses in use here are of small size.

The Liebfrauenmilch is an excellent wine, made from grapes which grow on the site of the very battle-field where, in the year 1686, Louis XIV. completed his mnrderous design-in the suburbs of Mayeace. The best in quality of the wine is raised on the plantings which lie in contiguity with the monastery of what is supposec to be the Liebfran Order. In 1822 this wine brought fifteen hundred florins tation.

per pipe. Its superior qualities appear to be owing to the protection afforded to this particular site by the church building from the north and northwestly winds, also by the genial warmth produced by the shelter of its walls. The soil is red clay with gravel intermixed. The wine is fermented in the barrels, which are slightly covered. It is first drawn off the lees at Christmas time, and again in the following autuum.

Westhofen. Here then draw off the new wine twice, once in April and again before the next vintage,

Osthofen, Bechtheim, Dienheim, Oppenheim. At these places they draw off the wine three times in the year. They also train vines on trellis-work, but the wine who rurely sell a single barrel, but they they yield is bad, on account of the height of the fruit from the ground. The wine made from the fruit which is grown aloft in these arbors is worth only three hundred florins per barrel, while that which is raised on low rails will fetch five hundred

Nierstein has been already mention. Here the soil consists of red decayed slate clay. The site is very good, particularly that portion of it which faces the southern side of Krauzberg, called Klek. This clay soil imparts a high color to the wines much resembling those of the Scharlachberger, Nakenheim, Bodenheim, Laubenheim, Guntersheim, Petersberg, Ingelheim, Bingen, and their vicinities. The renowned Scharlachsberger grows on reddish slate clay.

Kreuznach. Here the grapes are crushed partly with pounders, and partly in grinding-mills between two revolving rollers. The work is also done in tread-tanks whose bottoms are perforated with small holes. When the fermentation commences, a tube shaped like a bended leg is fitted into the bunghole perfectly air tight, the larger end being inserted therein, and the taper end plunged a few inches deep into a vessel of water. Many people fill these vessels with must instead of water, and every two hours empty their contents into a barrel, for the purpose of adding to the absorbed by the must in the external vessel. When the rapid effervescence subis placed sideways over the vent; and when there is no longer any sound of effervescence emitted, the barrels are filled quite full, and the bung driven in tight. From this period the harrels continue to be replenished every fortnight until the first drawing-off takes place, which is at the end of February or the beginning of March; the barrels are then again refilled, and the operation is repeated at the stated intervals until the time of the second drawing off, which takes place a short time previous to the blossoming of the vines.

All Rhein wines are completely fermented, and are, therefore, a little tart. They are valued especially for the gayety and bnoyancy of spirit which they impart by reason of the etherial rapidity with which they prevade the system more than any other wine; and while they exhilarate the frame, they do not molest the head. Age improves them more and more. Of all wines, their good qualities are the most difficult to counterfeit, though a wine very similar to the Rhenish can be manipulated from the French by the following recipe: Three parts sugar, one part cream of tartar, three parts good brandy, to which add of wine less enough to create a good fermen-

To make Rheinwine artificially out of Warzburg, Kitzingen, Marksteft, Marktsugar or fruit, much acid matter must be added by the use of cream of tartar, or, what is better, tartaric acid. The proportions of these ingredients will be as follows: Of acid, an excess; of saccharine matter, a minimum; and of wine lees, a sufficient quantity to induce thoroughly the fermentative process.

The most certain way of obtaining genuine wines is for the purchasers to pay a visit to the wine countries themselves; when there they will be sure to obtain the most genuine and excelent productions of the respective districts. All the best vintages are chiefly in the hands of owners, put their whole crops up at anction, or dis pose of them in the gross by private sale to foreign wine-merchants.

The stranger, however, will every when readily find an agent at hand, who know perfectly well every cellar in the place and its owner, together with his weak point and his private affairs. Through such as agent great bargains can be obtained o the choicest wines at a much cheaper rat and of a purer quality than can ever 1 procured from foreign wine-merchants Wine can also be purchased to great ad vantage of the wine-merchants themselve in the Rheingau, and the neighboring cities of Mayence and Bingen. Moreover these dealers have also, in many respects greater facilities of transport than any negotiator in a fore:gn country can possibly command, by which it results that they can afford to sell at lower rates and in smaller quantities than any others; which latter is an advantage totally unknown in Rheingan, where sales are effected only at wholesale in entire hogsheads, each of which contains from 1300 to 1400 bottles of Rheingau measure, or 1176 litres.

In Mayence the wine measure is as follows, viz; the ohm contains 20 quarters; the barrel, 8 ohms, or 160 quarters; the ohm, 180 Frankfort bottles. The measure contains 94 cubic inches French; 100 meas ures-1601/2 Berlin quarts. The ohm contains 140, the barrel 1050 litres, French measure.

FRANCONIAN WINES.

The Franconian wines in Bavaria, es pecially those of Wertheim, Wurzburg, Kitzingen, Marktbreit, Marksteft, and Ochsenfurt, are similar to the Rhine wines but of lighter and poorer quality, less acid, and in some respects more wholesome, The best kind of this wine is that styled "Leistenwine;" so named from a place on Frauenberg, near Wnrzburg, and it is grown on a plot of about sixty morgens. This wine, when of a certain age, is superior to the other German wines, and perhaps to all other kinds, from its more pleasant flavor, its spirit, bonquet, ane its salubrious qualities. Next in order is the "Steinwine," which is raised in Steinberg, near Wurzberg, on a plot of about 490 morgens. It is more fiery than the former kind, but is never so palatable nor so fine flavored, being often of a hot and alcoholic nature. There is a third sort of this wine, called the Culmuth. It derives its name from a mountain ridge which lies between Lengfurth and Homberg, belonging chiefly to the Duke of Lowenstein Wertheim. The Schalsberger wine is also much appreciated.

The Wurzburger and Werthheimer wines are the two principal kinds of Franconian wine which are known extensively in com-

The Wurzhnrger is generally raised near

breit, etc. It is a light wine, of a yellow color, and of a poorer quality than the Rhine wine, possessing greater acidity, and is therefore not so pleasant to the taste, and is even inferior to the Werthheimer, When the wine is intended for the Saxony market it is generally colored of a darker hue than natural by means of buint sugar,

The Werthheimer wine is raised on the mountain sides on the right shore of the River Main. The vineyards commence at the villiage of Urphar, and extend to Hasloch. Next to the Stein, Lei-ten, and the Calmuth wines, this sort is considered the best of the Franconian wines. The most superior in quality are raised opposite to he cities of Worthheim, Remberg, Kuff Itein, and Wetterburg. These regions lie ntirely open to the sun from his rising to is setting, and the soil itself is of the very est of its kind, called Leber erde (* Liverarth"). The plantations are generally set nt with "white grapes," and the vines of he finest species, like the kindred sorts of he Riesling, Esterreicher, and Eiblinger.

Of all the Franconia wines, the Werthreimer most resembles gennine Rhine wine; u flavor they are alike, and, if not so fiery, ort they are somewhat sweet r and more alatable. Many prefer this wine, as more vholesome than the Rhine wine; and it is esorted to medicinally in hemorrhoidal effections.

On account of the eminent qualities of these wines, we will devide them into three classes, viz.: 1. The Remberger and Wetterburger: 2. The Kaffelsteiner ou Sand; 3. The Haslocher. The last named is more pleasant to drink than either of the others, because it sooner attains its maturity in the barrel, but the two former are preterable for long keeping.

The Werthheimer wines, on account of the rich soil, are heavy, and their essential qualities become developed only in the course of six or eight years; therefore they are drawn off three times during the first year; first, in Carnival time: secondly, near St. Jonn's day; and, thirdly, in autumn. In the second year they are only drawn off twice, and in the third and fourth years only once; which depends upon whether the wine is the produce of a good season or a middling one, and whether it is raised in a richer or poorer soil, If kept in good cellars and good barrels, the old wines can be preserved a long time without being drawn off; but the barrels must be refilled regularly. Like the Rhine wines, they are improved by age. A genuine Werthheimer wine is readily distinguished by its richness, and its glow in the month without biting the tongue; by its pleasant bouquet; and by the circumstance that, if it be drank in excess, it will not sour the stomach

Electricity and Wine,

Recent experience in Italy gives some facts which prove conclusively that a weak but continuous current of electricity through wine causes a deposit of albuminous substances, diminishes slightly the amount of alcohol, which latter is accounted for by increase of acetic acid. It gives to the wine the bouquet which is otherwise only acquired by age, and without doubt aids the keeping qualities of the wine. There is a hope expressed that in time there may be a method found by which sterilization will be accomplished by electricity.

Subscribe for the MERCHANT.

THE SCIPPERNONG GRAPE.

Many of the grape growing readers of he MERCHANT have heard much of the amous Scuppernong grape of the South, vithout even having soon it, or read any lescription of this widely cultivated and aighly prized wonder of South Carolina, leorgia, Florida, Alabama, Mississippi. and the southern sections of North Carolina, dirginia, Tennessee and Arkansas. As a matter of interest and curiosity, and for general information, we therefore take the ollowing notes on this variety from a recent ssue of the Vineyardist,

The Sempernong grape was discovered y the colony of Sir Walter Baleigh, on the island of Roanoke, North Carolina, and he original vine that first attracted the attention of the new settlers, over 300 years igo, is said to still exist there, as a living proof of the great age attained by the native American grape. In appearance, wood, 'ruit and habit, it is entirely distinct from ill other varieties, or "unique," as one authority says, and who adds. "There is a resemblance between the V. Vinifera. Labrusca, Estivalis, Cordifolia, they will all intermingle, producing hybrids, but none of them can ever be crossed with the V. Rotundifolia, which blooms two months later than either of the foregoing varieties. The odor of the Scupp cruong when ripening is delicious, and entirely distinct from the Fox grape family." The growth of the vine, or rather the space over which its branches extend in a series of years, is almost fabulous. The bark of the Scuppernong is smooth, of a grayish-ashy color, variegated with many small, dot like speeks of lighter hu; the wood is hard, closetextured firm; the roots white or creamy The leaves, before dropping in autumn, become of a brilliant yellow.

The people of the South are devoted to this grape as are the people of the North by the widely grown and faithful Concord, and defend it enthusiastically against all criticism, calling it "A Drome Gift," as the vine takes one of itself; does not require and will not suff r pruning; bears abundantly and has no diseases.

Cone rning it, P. J. Berckmans, of Georgia, says: "I could not say too much in praise of the Scupperaong as a wine grape It is one of those things that never fail, of course I do not compare it with the Dela ware and other fine flavored grapes; but the question is where, where shall we find a grape that will give us a profit? We have it in the Scuppernoug. It cannot be grown as far north as Norfolk, ' And it is thus indersed by J. H. Carleton of El Donado, Ark.: "The fruit is so healthy that it has never been known to make any one sick unless he swallows the hulls and skins which are very indig-stible. I made some Senpo mong wine list year with very little sugar (1', 1bs to the gallon must), and although the grapes were not near so ripe as they should have been, it has a fine body. It is called by some the 'bazy man' grape.' I admit the charge, and prize i more on that account.11

It is a little remarkable that the bunche or clusters consist usually of only from si to nine (rarely more than the last number very thick-skinned pulpy berries. Thes ripen in August and September, not all a the same time, but fall off successively when ripe, by shaking the vine, and the are thus gathered from the ground. Color yellowish, somewhat bronzed when fully ripe. The pulp is sweet, jurey, vinous, with a musky scent and flavor-a delicate

perfume, agreeable to some tastes, repugmust to others. For wine purposes the Scuppernong has its warm advocates among. American grape growers, as will be seen by the following, from a letter of S, I Matthews of Montrello, Ark,, written for the Bushburg catalogue:

"The Sempermong makes a splendid white wine; its fruit, though ordinarily do ficient in sugar, is very sweet to the tiste, owing to its having but very little acid. The saccharine deficiency may also be accounted for, in a measure, by the fact that this grape has been hitherto, for the most part, grown upon arbors, a plan of training that more if-cirally than any other excludes the sunlight and heat from the fruit, which it is the practice to gather by shaking down from the vines, whereby a considerable proportion of but partially ripe fruit is obtained. And yet according to some tests, the Scine p rnong has registered 88 degrees on the Occhsle) must scale, which would give 9 per cent, of alcohol.

When it shall be planted on dry south hill sides instead of low moist bottoms. when it shall be trained on trellises, where the sun-heat, both direct and reflected from the ground, shall bathe the trint and toliage mstead of upon tall inbrageous arbors through which the sun s rays can scarcely penetrate, and when only the perfectly ripe fruit shall be carefully hand-picked instead. of being rud by shaken and all berries that will fall gathered and pressed together,

there will be little, if any, lack of sugar Scuppernoug is emphatically the grape for the South. Its juice is expable of being converted into the finest of Muscatelle sweet wines, or into superior light dry the completion of the public building at with s 2

These grapes, which, as before stated, tipen in joint as early as August, should not make their appearance in all our village as well as city markets, before our early varieties are fit for table uses, the same as do sometimes vegetables, strawberries, peaches, ite, so that our plople may becom-practically well acquainted with them and not have to be contented with a description, which, though it may be interest. ing, is nevertheless tasteless and that irless .

tratting Grape Vines

recent date has a long editorial, giving the as follows:

First. The grafting was a success as appearances, thriftily, the first year.

Second. That the grafts blossom well nough, but the grapes set badly, and those ; the size they should.

And, finally, that the "failure of the Muscat to assimilate itself with other stalks. will in the future confine all Muscat vine. yards to irrigated districts, where the phylloxera remedy is always at hand "

CIVIL APPROPRIATION BILL

Anong the items of Pacific Coast interest ans rod in the bill as amendments to the House bill were the following - \$100,000 for Los Aug los, Cal., \$1271 to reimburse Portland, Or., for its assessment for Custion house priving hts, 540,000 for a light stan in it Point Lomis, Cit, lower down the chite, ~250000 for lights and fog signals at Ballast Ponta, Sur Diege Bay, Cal.; -signor for a light house at the mouth of Umpqua river, Oregon, \$15,000 for the purthis of a whire at Astonia, Or \$1,500 for s superintendent of the life-saving stations in Washington Ly., Oregon and California, An expenditure of \$7735 is made for previons appropriations, authorized for repairs to the Point R yes Light Station, Cal., On this subject the Presno Expositor of Sacramento and San Joaquin rivers, Cal., and Puget Sound, Washe, are included in results of some experiments which sum up the appropriation for lighting rivers, \$5,000 for the hydrography of the Coast of Califormul -5,000 for the continuation of the nearly every graft grew and that, to all triangulation in the Southern California, \$2,000 for the continuation of the survey of San Francisco boy, 57,000 for the survey of the coast of Oregon, \$9,000 for the survey that do set, do not grow to more than half of the coast of Washington T rritory, \$500 for the investigation of dangers to East Gulf and the Pacific Coast; \$1200 for magn tic observations at Los Augeles, \$2,500 for continuing observations on the Pacific Coast. The Pacific Coast is included in the appropriation of \$20,000 for an inquiry into the decrease of fish.

Grand Total

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FOR SALE.

A Wine Press

-APPLY AT-

Office of "S, F, MERCHANT."

The subject of much discussion among grape-growers at present, is the advisability of turning their wine grape-vines into raisin growing ones. In order to have the benefit of recent experiments in grafting, for reference and for instruction of those desirous of attempting the change, Mr. Wheeler, Chief Executive Officer of the State Board of Viticulture, has issued the following circular, addressed to the raisin growers of Fresno, Yolo and other places where raisins are made.

During the next Spring, many grapegrowers who in the past, have cultivated grapes for wine-making, will graft their vines into muscats for raisin-making purposes. From those who will make this change there have come to me numerous inquiries as to the suitability of ordinary stocks for the purpose. The experiences of the past on the subject are somewhat conflicting, but knowing there have been trials enough already made with this grafting to determine its value, if the results were but known. I am endeavoring to learn them for the instruction of the public. Believing you may be able to assist with your knowledge and experience, I have taken the liberty of addressing to you the following questions, which you will please answer by mail at your earliest convenience.

First-Have you ever grafted mnscats Into roots of other varieties?

Second-When was the grafting done?

Third-Ahout what percentage of the scions grew?

Fourth-Do they appear as healthy as museats on their own roots?

Fifth-Does the fruit set well and ripen equal to muscats on their own roots?

Sixth-Would your experience lead you to advise others to employ this method?

Remarks-If unable to answer these questions from your own experience, will you kindly note here whatever information you may have from others regarding the success of grafting muscats on to other stocks.

Bonfort's foreign vineyard reports are as follows:-In the vicinity of Bordeaux, since our last report the weather has been stormy most of the time and wet so that an active war will have to be carried on to rid the vineyards of the many cryptogamic diseases bred by the moisture impregnating the soil. Our wine growers will not fail to do so; they have indeed been applying preventive treatment all along during the intervals of dry weather we have had since May. Trade has meanwhile been comparatively quot. Following are the sales brought to my notice:

In Champagne, despite the incessant rains, the mildew has disturbed vineyardists but little, the preventive treatment having been general and effective. The quality will be good but yield light.

In Algeria, the weather has been all that could be wished for; some rain, usually rare in Italy, was welcome. The vintage will be abundant and of good quality.

In Coguac, carly grapes have suffered least from the untoward weather, while the vines blossoming late, produce hardly anything.

Vineyards in Hungary have suffered somewhat from the abnormal and sudden changes of weather which have so far characterized the current month. During the early part of July, cyclones swept portions of the country, notably the Werschetz region, and since then heavy rains have prevailed flooding the lowlands and carrying away valuable soil from the vineyards occupying the slopes of hills.

There has been a widespread dropping of grapes in the northern wine districts of Italy so far this mouth in consequence of the almost uninterrupted beavy rains. In Piedmont and Lombardy, hailstones aiding we hear half the vintage has been lost in this manner. As for Italy generally, the mildew has made its appearance everywhere, doing more damage than in former years. The usual treatment has been applied. The Phylloxera has made its appearance for the first time in Tuscany, in the island of Elba, in the province of Syracuse, and at Pitigliano, in the province of Grosetto.

In Portugal the vines have so far been doing remarkably well, taken as a whole; the formation of grapes has been perfect. with a promise of abundance; it is therefore to be hoped that thunderstormes and hail-showers or two much rain may not interfere. So far there has been no general complaint of excess of moisture, but the usual vine diseases, the phylloxera, mildew, anthracuosis and pyralis have appeared in some localities

The fiery cross is being swiftly borne over the mountains and through the valleys of the State, and in response to the signal the vinvardists are rallying in the common cause. During the past fortnight meetings have been held at all the centers of the industry throughout the interior, and ways and means have been discussed for selfprotection. The grower of the grape no longer proposes to rest content to see his crop rot upon the vines, or be sacrificed at figures which either mean debt or starvation, or both. The lack of united action which has heretofore borne heavily on the poorer classes engaged in the business. The rich proprietor could store his product and market it as opportunity offered, while his neighbor had to submit to ring rule or be ruined. The difference between classes, in point of trade, is stirkingly illustrated in the following except from the Independent Culistogian:

"Within the past few days a wine maker of means in Napa Valley finished shipping 10,000 gallons of 1886 white wine to one of the big firms in San Francisco who can pay small makers only 9 or 10 cents for 1887 wine, and he received 35 cents per gallon, cash in hand; and they were very anxious to get more at the same rate. This is a fact, and it shows the advantage that a man of means has over the poor wine growerone who cannot hold his wine till he can get his price. Another Napa Valley wine grower very recently disposed of a quantity of 1886 white wine at 30 cents per gallon. Wine makers in the vicinity of St. Helena will not offer less than \$12 per ton for grapes other than Mission and Malvoisie; the price may be higher. But wine makers are not talking publicly about any prices that they may be willing to pay. Growers down there pretend to ask \$18 to \$20 per ton; but it is the wine makers' prices generally that take the grapes. Or, in other words, in such transactions the short pole instead of the long one gets the persimmon

If individual benefits are to have prefer ence to the common weal of the many struggling to build up an important indutry, as in the instances quoted, it is not difficult to predict the final outcome. Some hope is extended at present that this unfortunate condition of affairs will be oblit erated by the adoption of a more conservative system of business. The determination to derive a profit out of the crop, if not from wine, by some new departure in trade is a step in the right direction. Dried grapes, raisins, vinegar and condensed must, all offer an avenue for escape from prices based on wine at 9 cents per gallon.

WHEN THE SUGGESTION was first made to give our boys a chance in the vineyards, a howl went up as usual from the pessimist, who feels himself personally outraged by the innovation. The proposed wages of \$1.00 per day, was considered extravagantly high, in comparison with the \$1.10 paid the Mongolian serf, who boards himself. especially when the difference in the amount of labor in favor of the latter was taken into account. It is pleasant, however, to note that the experiment made at Vina, under the progressive management of Mr. H. W. MeIntyre, has turned out a complete success. The boys work well and have conducted themselves so satisfactorily, that more will be engaged immediately. As Mr. McIntyre says, it is necessary to understand boys, to be able to handle them. An old head cannot be put on young shoulders, and a certain amount of allowance must be made for what may be termed capers. The manager at Vina, evidently does not forget that he was a boy himself, and knows the way to get work done without tightening the rein, further than to control. The result of his experience will doubtless encourage other grape-growers to take up the good work to the advantage of the youngsters and themselves. It may give hundreds of willing boys an impetus, which will benefit them through life, by opening up new ideas coupled with some other object in existence, than loafing around street corners smoking villainous cigarettes. Any boy who is willing to pack his blankets and start for the country to labor in the vineyards, has got the right stuff in him, and should be encouraged.

The exports of Sherry to all parts of the world from Jerez, during the year 1887, are computed at 45,000,000 gallous.

THE LETTER received at the State Board of Viticulture, published in this issue of the MERCHANT, from a San Francisco winedealer who is studying the wine production in Europe, states that California wine, which begins to lose its virtue after a storage of three years in this country, continues to improve in Belgium after a storage of many years. He does not know how to account for this unless it is caused by climatic influ-

President Wetmore says it lies wholly in the system of storage. The cellars there are constructed in a manner far superior to anything in California. The cellars of Belgium sink far into the ground, and the wine is stored for many years where the stightest draught of air cannot reach it.

"The philosophy of this," said Mr. Wetmore, "the Californian has not yet come to understand. The cellars here are usually constructed in such a manner as to allow a greater or less degree of ventilation to pasa imong the cusks. It is a mistake. The air absorbs the best ingredient of the volatile deoholic substance, leaving the watery subdance entire, and works a change in the ntire process of fermentation that tends to veaken the virtue of the wine.

"Especially is this true of the lighter or tryer wines. In this respect B lgium is far thead of us, and, until the California prolucer learns how to properly store his vintuse, he will continue to lose a proportionate amount of dollars, and our wines will never be able to successfully complete in foreign countries with the productions of Belgium ind France."

Mr. George West, the well known wine grower of Stockton, reports that the vintage has already commenced at Minturn, and that the prices given for grapes were very low, too low to quote. "This will be the hardest year the wine growers in this State will ever know, "said Mr. West," and I think that it will be a useful lesson to them, although it will entail many hardships, The crop in our section will be about the same as last year, and the Superintendent of Senator Standford's rauch, Mr. McIntyre told me that they would lose half of their Zinfandel crop by sunburn, and I know from my personal observation that the crop in other counties will be very small, although the Santa Clara county people say that they will have 500 000 gallons in excess of last year; but Santa Chara is not the whole State, and I promise that the whole crop will not exceed that of last year, or equal it, by a large margin."

Mr. N. F. Degoty, a well-known wine man of long experience in California, has inaugurated an enterprise of much importance to the wine growers of California. Having obtained from the Government of Mexico a concession and the exclusive right to introduce in the territory of the Republic of Mexico, free of duty, all the foreign goods and raw materials necessary for the manufacture of wine brandies, liquors, etc. and the introduction of said products into all the States of the Republic, he proposes to enter into negotiations with producers of raisins, dried fruit and condensed must, for a supply of these commodities. He has established at Ensenada, in Lower California. with distilling and fermentation apparatus enclosed in a fire-proof building.

The advantage of such an industry will be appreciated, when the high duty which is now paid on imported wines and brandies is considered. The enterprise is one which promises to be exceedingly lucrative.

Wine Notes from Europe.

John H. Wheeler, Esq.

thief Executive Vitionstural reflect.

a very interesting report by Arpad Haraszthy, in which one passage struck me parof the aims markets of the wor'd.

As you remember probably, I left San Francisco about three in aths ago to visit the methods improved distribution of the methods improved distribution of the methods improved distribution of the methods in the methods in the methods of the method of the methods of the method of the methods of th the things I see, a few perhaps may be setint rest to you call the vitical tird interests. of California, and although my trip was notend differ my own bin mt by, I should be highly pt as daif it could give the least valuable information to my a lopt of Lone.

did not spend out hotate to study the possibilities of more using our ed a there, as coming from the Gorben State, produce I at

Europe into st Pine a gratid alamoras that ti-bles left as y talm some xpl sled. I commoneed in Hisland where only little wine is drunk, and only on State occasions. when they use the very best. The Duch Spanish have then I draw the Delens. are very conservative, and the natro bietem. of a new article with the mowered of remany difficulties. B Igium's ones to off rip ints of considerable more natural to us. There is the land of the true wine a bars, whire many mentak mere produce their effects for the dress deafter the task work to than in most other things, where it lears are transferred by hetrotom, where it comes as part of the dowry of a brid. There they drink wine, good wine, and know how to france 25,000 or not scare, and I have flemish part of Bolgium they drink perhaps (would productively good results if some more beer, hono the people are heaver, props, for was holden with to make the slower, but the other half, the Wallars as and wine is drunk every by Not appres then wait six mentles before they make ciated for its label, for as they always buy. If we want to self we be assure yourst have by the cask there is generally no label, but a dipet. for its morit iden. And this is the reason. From Belgium I went it Pais, it I shall why some of the California products I sent r main here till the victice season in an succeeded there so well. Burgundy is the month, when I intend to make a trig wine they prefer, and to peas them we through the difference and is reliable to would be obliged to send them heavy wines. Here the wine spession is again. would be obliged to send them heavy wines a bottle under ten years of age except these year with soll of at Karawag the approxi-I sent myself from California three years matrix view of wines, I was mare days ago, and the latter were prenounced by the returner's hing at 10 12 on 10 c atyoung.

my cellar at Sin Francisco, have attained know and consequently what to the Bill after three years in wood, their full stid - warch eises and asked for work as a coloose some of their qualities, keep improving here a good deal long rate twithst in ling a long sea voyage. Why, ilentically the same wine, coming out of the same puncheon, gives me three tim s mer preasure in Antwerp than it does in San Francisco. Must this be attributed to climatic influences. In that case we are very unfortunate, for Berry was formerly a little volume past of though making good witte, we can not keep the outside of Paris on the benders of the

it. Is it in the treatment. There so, for Evers in- whire we then we shall be able to bearn what we re-liring their gods and so the quire. A first, however, strikes in an all admission will payer, the selfthe cellars I have visited the moisture, the 1 by bittle Paris map as 1 or 1 To DEAR SID: In the S. F. Menoment of closeness, the dampness that prevails Jan 220 Free is darfew weeks ago Ir of Every where they are kept of on not on odor, but the proprietory mission, park to an inch of black mass severing berrols ticularly. It is the one where he specks of walls and everything. And the older the the importance of gathering reliable facts, wines, the Leper the earlies a review is concerning the requirements and demands the greated, in perfect darkness with a close an atmosphir that the endly hardy seems to burn. And box net verytrees or lafeweds was I we when the Barganthe principal way markets cold to complete my education as win makers by observing to be yould their massery. These in except is periture, in juris 2, in some ing si-In sociosca rechevaje con mas co · usible. They could also the Proper aluable information to my allepted he in always forfard view, the very heart of the my tap threath the East means of always forfard view, the very lest a did st grap trouby to 1 had and the treatment having cour dam in sufficiently those houses are in the hards of larger they can be a treatment of the winds of the bottle began to the self-only will be at a self-only will be at a self-only with the control of the bottle began to the self-only will be at a self-only with the control of the bottle began to the self-only will be at a self-only with the control of the bottle began to the self-only with the self-only will be at a self-only with the self-only wi houses. Still it afford I me considerable the totte repricting to a perfect houses. Bargandies in over the the green'd white once an inquiry about our native wines, whee in two 'sr and not quite a link place.

To introla the ways in Bilginia w ought to lows other wile probable our tries have done these reachist years. The girl n, th. Gooks, Prougs . Agricus Hungarias, parket ill have their page for degree at the new hore they so the expression of the ir network wines. It is not be to also by the glass and is say done it too and be country who are they a then I a sythic ar outsity out post tree, for other the median reless s, realls the country fith watery of drink and souds to in this year plasmi drink it. Colors of private parties worth in drinking it. These places law inwith a great size second by making the seen the auction sale of a batch-for which wines known have for aght forth large produced over 25,000 frames for whom bring orders. I have no introduced to the American maps from all over the country. In the box, with good wines, att. they is not general. venture. Of coursely a minutexpection they are called, take more after the I reach ple to buy our so for case, on ames, on l

with good keeping quainties. During the completely dracks were, and a good diagon whole mouth I spent gong round the small it. It is no more a reality to a pulley, but interior cities of that country. The verdrank of pro-the cleapery are wine, the more everybody very good, but altogether top part bothe. Inquires mad and estimate houts brought formula other and virtue. To my great surprise, wines, which in the series of the trial - Seed wanted to relopment, and must be bottled or else monthly random of the largest elected $saw_{i} = Aft(i)s(air) + i (i) (i) (i) + i (i) (i) + i (i) (i)$ bottos to tal that par , I was and paint 5 frames a by from 5 x, M, t + 50 f M. and begin the next morning. I have be a there now in in ath, and a rtunly what I have seen repays me amply for the shariff. I made and the Wisters I got on a charals

relicing life time the form one of rum at beight the para, but a fix with us in Fred Life to to the water in rations. The tral of Breys oal yearnes-Busy, swer sorten, mare the year A cash so car here, as stord

Ly as abrighening that early Lowey, Well-of Pri all williams Presiding 24, 1888 R. Act

THE WINE IL FIR THAT. trodically Sir G. G. y. p. 5. Legislature, provides that the Const. discussions may great to the projection my very of paid I with vines to the At all discourses a total state of n the than 25 grid is not by than 5 2 de les experity for the purpose of distring sprits from an and the area of a terthe profess of his vir. yard sails spints Approximate real professions 1 as via yerb. All via see firm It of outsining may then the property of spirits specified by the Barshar before it Provision is stall for all riths at and r. guizantes, quarterly rations and a special st reroom. The Distriction VA to file a ner apply Sir Go. Grv hersti. the as the whole prove out great 1 is not to wine growers of the them too may to with the Alester

Virginial of the areas prosibilita in ascran ato on I asky if a tion for the maximize as it. Sans. were projes di suo was a la disvinery. Many favored grap strying. organization was effected, and as in the agree I not to sell to wineries a option of a special committee appoint d. owners along Canstoga, who have a has amores of their own are organized and it is expected that many tensor graphs are be dried in Napa valey. Missiste in Malvas, which are in little 1 man be wine makers at any time, will be an aid larg quantities

Among those present with Joseph Lostier, L. H. Lessett, G. C. McMa, et al., L. Halks of Press r County,

THE FIRST dieth is sale of tractic graps was held in N w Yerk list in 10th 11th fruit, it is said, eath if be owners I we that which is grown in this State. In only obvaitage it has is that it from a core the season, and can be a grballers. On display, the fruit is so to sent vv ry attractive the accesmall and soft. It brought in sa-5 c nts per lb.

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named the State Vittems A transfer has received a letter south of rags Post Exchange, at New its will be says that a cloup substitute of stable. Violence raisins ima Spain, is wanted, and that in the sufficient of the New York market. 1 art will fill by 2 rap s would pro-

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WINES OF THE GIRONDE

The Department of the Gironde possesses about 149,000 licetares of vineyards, producing annually on an average 250,000 tonneaux, or 2.280,000 hectolities of win-These wines are ech brated for their variety their remarkable perfection, the low prices of their common qualitys, the enermous prices of their first qualities, and by the remarkable trade to all jears of the world to which they give rise. The estimated average value of two-sixths of the annual produce is 50 frames the barrique; twosixths, 125 francs; one-sixth is 250 francs and the last sixth, 600 frames the barrione immediately after the spring racking. This gives a gross production of 280 millions of franes, and, if we deduct from that an average annual expenditure of 500 francs per hectare, we find that the Gironde raises an annual clear value of 180,000,000 francs in the shape of wine alone,

The Gironde is practically divisible into tive wine producing districts-namely, the Médoe, a district on the left bank of the Galonne, extending from Blanque fort to the sea; the Graves, or high plains about the confluence of the Garonne and the Dordogue; the Cotes, or inclined banks of the right side of the Garonne; the Palus, or low marshy territory on both banks of the Garonne in the more manudiate neighborhood of Bordeaux; and the district of Entre doux mers, or low land between the Dordogne and Garonae.

THE MEDOC.

The Médoc, geographically so called, is the tougue of land which forms the left border of the Garonne after its union with the Dordogue, called the Gironde; and it extends from Blanquefort, a little town about fifteen kilom tres west - f. Bordeaux, to the sea. But the Mé loc of the vinophilist hegins only west of Ludon, in the Commune of Macau. It produces the wines of Labarde and Cantenac; in its very heart those of Marganx. Further on are the great growths of Saint Julien and Panillac, Still farther west it produces the Estéphe, and at its western limits the wines of Saint Seurinde-Cadourne. This is the Haut Médoc, a district of about forty-five kilometres in length, and from eight to twenty kilometres in width. Its general feature is that of a vast plain, falling somewhat towards the Giroude. Its soil is gravel, or rolled quartz or flint, covering a subsoil which is sometimes clayey, but most frequently formed of sand, or of s in I which by an infiltration of hydrated iron oxyde has been concreted partly into a soft, friable, pudding stone, partly into a very hard, rock-like material, both being known under the name of the allos. This variation of the soil causes a great variety in its products so that the best and most inferior wines grow frequently side by side. As the vinare the same, and their cultivation identical, the soil alone can explain the difference, but the special conditions of this diff rence are yet wrapped in mystery.

VINES CULTIVATED IN THE MEDOC.

The vines cultivated in the Melloc are not many in number, but the names by which they are d signated in various communities are very numerous. Happily there are at Bordeaux in n of science actively engaged to unravel this confusion. Foremost among them is M. Boucherot, proprietor of the estate of Carbonieux. For a long time he has cultivated all the best known vines of France and other countries,

plants, and experimented in his vast vine yard with all the special methods or cultivation usual in the Gironde. He has not only used the results to his own advantage, but allowed everybody to profit by his observations. The most common vine is the Cabernet

Sauvignon. This vine is also termed Petite Vidare in the neighborhood of Bordeaux Its canes have nodes at frequent intervals its leaves are small, rather thick, more long than broad, with five lobes separated by deeply out sinuses, and strongly toothed at the margin. Their upper sid is rugged, and of a light green color; their lower side is slightly woodly. The blossom is not very easily spoiled by cold weath r. The bunch of grapes is of less than middle size, pyramidal, longish, generally bearing two somewhat detached wings. The berries are small, of even size, bluish black, very bloomy, with a thin hu k. Th y are very juicy, and have not the sweet astring at taste of the Burgundy graps, but a more acidulous, refreshing, and most agreeable taste, giving the impression, says Bronner, as if one had the Bord aux wine already in one's mouth. The struame of Sauvignon is derived from the similarity of its leaf and wood to the vine of that name, which will be mentioned lower down. It is the b st and most fertile of all the fine black grapes of the Gironde, ripous the earliest, and spoils the last. It is the most estermed in the great growths of Pauillac, Sout Julien, and Margaax; it makes up five-rightlis of the plantations of Lafitte, Mouton, Latour, Léoville, Margaux, Rozan, &c. It grows particularly well in the heavy sents mixed with much sand and clay. It is a gular in its production, but its product, like that of all the best vines, is never abundant; it carries all grapes to an equal degree of maturity at the sam - time, without showing on the same stalk, black, red and green grapes. It yields wine of a fine color, full of delicacy, and possessing great bouquet. The wine during the first years is a little harsh, and in order to acquire its perfection must be kept four years in the wood and two years in bottle. But under these circumstances, if it be of a good year, it keeps xceedingly well, increases in delicacy and bouquet up to its fifteenth year, and keeps its auxlities up to the twentieth. After that it loses its soft fullness and becomes daier, The Cabernet Sauvignon stands to the great wines of the Medoc in the same relation as the Pigeau or Noirien to the great wines of the Cote d'Or; as the Rusling to the great wines of the Rhangau; they would not exist without it.

The second in importanc amongst the vines of the Gironde is the France Cabernet (or cabernet gris) a vari ty of the former. The nodes of the cames are more distant from each other than in the former; the leaves are more wide than long, and dark above, but otherwise like those of the Cabernet Sauviguon. The petals of its flower do not fall at blooming time like those of other vines, but open at the top, and form a kind of mink's hood over the ovary. The bunch is much like that of the Cabernet Sauvignon, but has smaller berries. This variety prospers in lighter soil openes donces; b tter than in heavy, Its wine may be described in the same words as that of the first variety,

The Merlot (or gros doux) has a fine bunch of grapes about the middle size, of pyramidal form, and winged; the grape are a little flabby, bluish black, and with a thick husk. The Merlot can not bear has maintained a collection of synonymous drought, and grows best on moist inclines, thick double walls, and a double roof with in manufactured wines.

or so-called graves fruiches en voleuux. Its graps ripens a few days before that of the Cabernets, and when once ripe it easily becomes rotten. Its wine is lighter and earlier ready than that of the Cabernet, and has much less bouquet and juiciness (s 've) than the latter; it also wants body and durability, but its great property is to be soft and

Pagnierre states that the Merlot has its name from merb (a thrush) because this bird was a particular friend of the grapes of this vine

The Mullior bears many names in the Gironde, amongst them Noir d. Pressie, Gourdoux, Estrangey, Cot ronge, Pi d d-Pordrix. In Central Germany it is known is "Blue James" or "Jacobin,". The vinis an abundant producer, and thrives in consistent soils, but also in the gravelly soils if they are are not too lean. Its graps is very precocious, very sweet and tasty much melin d to rottenness when one ripe, and gives a light wine without qualities, particularly when grown on fit land. This explains why this vine is not much grown in the great situations of the Mé loc it is only allowed in the low grounds, and its grape is admitted only as material for s. cond-rate wines.

(To be continue L)

THE WINE TRUST

The Sucramento Bee again calls attention to the injury which the Wine Trust is doing. Irnst is doing the development of this State, by forcing the grape growers to accept \$10 and \$12 per ton for grap s which are worth twice the amount for wine purposes. It says: The effect of the combination has been to make the few large wine merchants wealthy in the past two years, while the poor vineyardists, helpless in the hands of the monopoly, have almost decided to tear up their vines. The inevitable ffect on the State's progress, if the power of the Wine Trust is not broken, can be readily imagined, for the Eastern sojourner will undoubtedly decline to buy good vinyard land and plant choice vari ties of vines if he believes that after all his expense and four years of waiting he will get but \$10 or less, per ton for his product. At present the small vineyardist feels that he must either sell his wine grapes for what the wineries will offer him or else allow th m to rot on the ground. His best detense doubtless would be to co-operate with his neighboring vineyardists and put up a winery and then sell the wine at auction in the East as fruits are now sold. Such sales would doubtless meet with as great success as have the fruit auctions; and these latter have broken the power of the combination of wealthy fruit shippers by acting entirely independent of them and treating them as on a footing with the humblest grower in the State. Co-operation is not always possible, however, for vineyardists, even by co-operating to find the capital to start and run a large winery. The Natoma Vincyard Company is deserving of credit for their fight against the trust, notwithstanding the fact that it was made in their own defense Last year, instead of selling their grapes as usual, they made them into wine rather than submit to the dictation of the trust, and, although their accommodations were meager, they made an excellent wine which they have declined to market until its quality was assured. This year they have built a large brick wine warehouse capable of holding 700,000 gallons of wine. There are

a layer of soil between, the temperature being thus made so even that without artificial means of cooling the thermometer never varies more than one degree and a half from 70°. Governor Stanford, too, told the Wine Trust to go to Tophet, and creeked immense storehouses at Vina in order that tis grap's could be turned into wine and thus bring a fair price. As the revenue of Vina belongs to the Stanford Universityhis gift to the people of the State-he thus worked both directly and indirectly for all California.

These means of defense against the Wine Frust are not, however, open to the small vineyardist without capital, and co-operative sincries may prove unwieldly things to manage. The question then is, in what shape can the grower put his wine grapes so that he need not be at the mercy of the Wine Trust. The Bie several days ago called attention to the plan of drying the grapes, under which the green fruit would bring in the neighborhood of \$20 a ton. Some of the growers of Steramento county have called a meeting of all wine grape growers of this locality for next Tuesday, August 11th, at 1 r. m., at Granger Hall, to thoroughty discuss the matter. The plan proposed is to decide on a fair price for the grapes, and to agree to dry all wine grapes unless the wineries will pay the price. 10 a course of this kind were followed in every county of the State, single members of the Tru-t would not continue to build \$750,000 blocks out of two years' extra profits wrung out of the small vineyardist, who is left nothing to show for his labor.

FRENCH WINE ADULTERATION.

A pleasant report comes from Spain concerning the spirit now used in the preparation of win's which are exported in such immense quantities to France, and are sent thence all over the world as French wines. This article is known as industrial alcohol. or German spirit, and comes chi-fly from Berlin, where it is distilled from potatoes, beet and other roots, cereals, and, it is said, even from sawdust. It is without color. and is alleged to be free from fusel oil; but it contains acid far more pernicious than the oil, and most deleterious to the health of the consumer. How rapidly it has come into use for the purposes of the manufacture of sparituous liquors, liquours and the fortification of low-class wines may be seen from the fact that in 1850 the total quantity of alcohol imported into Spain was 140,096 galions, while in 1860 it was 2,024,572 gallons; in 1870 it was 3,573,281 gallons; in 1880, 12,260,864 gallons; and in 1886 it reached the enormous quantity of 23,453,-000 gallons. The bulk of this spirit appears to go to France in the exported wines, with the alleged results of increasing the number of spicides in that country from the use of alcohol sixfold, of increasing the number of men unfit for military service fourfold, and of raising the percentage of lunatics from 9 to 16 per cent, of the population. The publication of these figures has aroused an aggration in both France and Spain, which has compelled the Governments to take action in the matter, and the Spanish authorttics, unable to forbid the importation of the obnoxious spirit, because of existing commercial conventions, have issued a royal decree which provides that all spirits import d into the country shall be analyzed before being cleared at the custom house, and if found impure are to be methylated, but it is not thought that the decree will effect its object. The high-class Spanish sherries are, of course, not affected in any way by the use of this "industrial" alcohol

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THE OLIVE.

Thou partakest of the fatness of the elive Homans xi A green olive tree, fair and of goodly fruit Accessiale xv. 16

In everything that is good, says Joseph Whitton in Table Talk, nature seems to have implanted an abundance of beauty and sentiment; and the olive is no exception to the rule. There is a Biblical, mythological, and gastronomic interest surrounding it, which it would be vain to look for in any other edible, -more, perhaps, than the ability of my poor pen can give full instice.

There is sometimes a ludicrous as well as a sentimental side to the olive at least, I have a recollection of discovering it on two or three occasions. I will relate one of them. It is well known that the taste of the clive to the uninitiated is frequently anything but pleasing, the character and degree of unpleasantness varying according to the constitution of the different palates -- all the way from Castile soap down to the ordinary brown. The occasion I refer to, was a private dinner party of some twenty guests, among whom was a maiden lady of sixty summers-a length of time, one would think, that should have given her the opportunity of making a friend of the olive. But, it appears, it didn't. I had the good fortune of being seated directly opposite to her at the table, and could not, if I had wished, have avoided the little entertainment in store for me. At the end of the first course the dish of olives was handed to her; and it then be came very plain to me-from the attempts she made to secure one on the and of her fork-that this was her first interview with the olive, whom, of course, she was quite excusable in believing to be an innecent little pickle. Not succeeding in getting it on her fork, she took the dish and scooped two or three of them on her plate. And then the "circus commenced"-and it was literally a "circus;" round and round the plate, ran the poor clives, dancing out from under the thrusts of her fork with an acrobatic agility which seemed to astonish my maiden lady. She lagan to grow very red in the face, and looked as if she would have given the world if the maker of that plate had not forgotten to put a coracr in it somewhere. Perseverance, however, did-as it generally doesbrings its reward; she managed to get a slight side hold on one of the little fellows, and then I could see the look of savage satisfaction with which she took up her knife and prepared to bisect his obstinacy. All my readers know that this is not the best way to get around an olive, and my friend seemed quickly to have arrived at the same conclusion, for she dropped ber knife, seized the mistaken pickle between her thumb and fingers, then with a serene smile open her mouth and-well, all things on this earth are transitory; but I don't remember ever seeing anything take its seat in the shadowy past quite as suddenly as did the serenity of that smile. A tight compression of the lips, a look on which doubt, surprise, and miscry, seemed about equally mixed, and with a frantic dive into her side pocket she brought up a handkerchief, raised it to her lips for a moment and then replacing it in her pocket, serenity reigned once more

Now let us drop the Indicrous side of the olive and take up the other, which is more interesting.

most ancient days, the olive has been held in universal esteem. No rank or station monopolizes the delicacy. It is found alike on the tables of the prince and peasand-a luxury to the one, to the other a necessity; an appetizer to the jaded palates of the rich, to the poor, sometimes, the only substantial dish within their reach.

The olive tree, which is widely distributed in the warmer temperate parts of the globe, is of the genus of trees and shrubs, named: Object Obja Europool. It has a knotty, guarled trunk, with branches of moderate spread, and a smooth, ash-colored bark. There is sometting in its very appearance that indicates its vigor, recalling the force of Scriptural reference to it as being emblematic of strength and prosperity. It is, indeed, one of the hardiest trees and though prefering warm and sunny situations, will grow on dry and apparently lifeless soil where other vegetation, even the least exacting, dwindles for want of nourishment (it requires, however, an annual mean temperature of sixty degrees); it will also grow on wet seit, and even under water. It is propagated from cuttings, and the easy and certainty with which these take root and flourish, no matter how carelessly they may be stuck in the ground, is vouched in the following account of the origin of a handsome olive grove on the out skirts of one of the little towns in Morocco: A military expedition, in the olden time, pitched upon the spot for an encampment. The pegs with which the cavalry picketed their horses were cut from olives in the neighborhood; and some sudden cause of alarm leading to the abandominent of the position, the jings were left in the ground, and making the best of the situation, developed into the handsomest group of olives in the district.

The leaves of the olive resemble those of the willow, being lanecolate, of a dark, dnll-green color above, and scaly and whitish gray beneath. The flowers are small and grow in dense clusters. The fruit, generally ovate in shape, though sometimes globular, varies in color, being first greenish, then violet, and, when fully ripe, nearly black. It never grows larger than a pigeon's egg, and is produced in such profusion that an old olive tree becomes a very valuable possession to its

The olives are gathered before they are ripe, and are then pickled in various ways first steeping them in lime-water, which process renders them softer and milder to the taste. Instead of pickling, they are sometimes dried.

The fruit of the Olea Europava is also that from which is expressed the olive oil commerce. The olives imported here come from France, Spain, and Italy, those from each country having their own several advocates and lovers among the epicures.

We find the ofive to have been one or the chief vegetable products of Palestine and an important source of that country's wealth during the Scripture period. The places devoted to its cultivation were called "olive gardens," and these were usually on high ground, semetimes on the monn-

The first Scriptural mention of the olive is in the viii. chapter of Genesis, where the return of the dove to the ark, announces to Noah the abating of the waters

"And the dove came in to him in the evening, and, lo, in her mouth was an olive leaf plucked off."

And it is reasonably probable that to this years). In European countries, ever since the peaceful incident the olive leaf owes its Near Terni, in the vale of the Cascade clined to be anywise sluggish. Therefore,

there is no other more logical source to which we can trace it, and our own sense of appriateness and beauty ought to be quite content to let it rest there. Being an evergreen the Bible also uses it as an emblem of prosperity:

"Thy children like olive plants round bout thy table."—Psalms execui: 3. about thy table.

"His branches shall spread and his beauty shall be as the alive tree."—Heser

Again we find it the first tree mentioned by Jotham in his allegory delivered from the top of Mount Gerizim:

"The trees went forth on a time to anoint a king over them; and they said to the olive tree, Reign thou over us

But the olive tree said unto them, Should I leave my fatness, wherewith by me they honor God and man, and go to be Judyes ix: 8, 9, promoted over the trees?"

A peculiarity of the olive flowers is their fragile hold upon their stem. The cultivators always dread even the slightest breeze. for it is apt to cause the flowers to fall. A writer speaking of this says. "Of all fruit-hearing trees, the olive is most prodigal in flowers. It literally bends under the load of them. But not one in a hundred comes to maturity. The tree casts them off by millions, as if they were of no more value than flakes of snow which they closely resemble."

Eliphaz the Teman, in his second reply to Job, uses a simile in which he embodies this trait of the olive:

"He shall shake off the unripe grape as the vine, and cast off his flower as the olive."- Inh xv; 33.

Ovid also alludes to this peculiarity, in his Metamorphoses:

"Florehunt Olea; Venti normere producci," which, freely translated, means: "When the olive tree blooms, have a care to the impudent winds."

So much has been said in the Bible, and by poets, ancient and modern, regarding the beauty of the tree, that the first sight of a grove of them is apt to be disappointing to the one who has been accustomed to see heauty only in foliage of buildiant green. Familiarity, however, corrects this, and the eve soon finds delight in the ripoling changes playing over the gray green leaves. Ruskin, in "The Stones of Venice," where he takes the artists generally to task for failing to do justice to the clive tree. attempts to show them what they neglect to see, and draws a picture, lumself, in these words:

"The hoary dimness of its delicate foliage, subdued and faint of hue, as if the ashes of the Gethsemane agony has been cast upon it forever * * gnarled writhing of its intricate branches and the pointed fretwork of its light and narrow leaves, inlaid on the blue field of the sky, and the small, rosy-white stars of its spring blossoming, and the beads of sable fruit scattered by autumn along its topmost boughs and more than all the softness of the mantle, silver gray, and tender, like the down on a bird's breast, with which, far away, it veils the undulation of the mountains," He also tells them that "the notable characteristic effect of an olive tree in the distince of a rounded and soft mass or ball of downy foliage," and "with trunk and branches peculiarly fantastic in their twisting."

That the olive tree grows to a great age has long been known. Pliny mentions one which the Athenians of his day declared was as old as Athens itself (1600

chief emblematic meaning. At all events, of Marmora, there is still flourishing a grove of very old trees, supposed to consist of the same plants that were growing in Pliny's time. Another ancient olive tree is that on the road between Tivoli and Palestrina. It is of great size and stood as a boundary between the two possessions, even before the Christian cra; and in the second century was looked upon as very ancient.

> As to the seven or eight olive trees now standing in Gethsemane, it is a matter of great doubt whether they be the same that were the silent witnesses of Christs agony. or, if indeed, they date back as far as Chatcaubriand asserts- to the time of the Arab conquests (637).

> The olive has been regarded, in all ages, as the "bounteous gift of Heaven"—the emblem of Peace among all civilized nations. Among the Greeks it was sacred to Minerva, and to the citizen, who deserved to be remembered by his country, no greater distinction could be awarded, nor was desired, than a crown of olive twigs; and a like reward crowned the victor in the Olympice game. It was also a Grecian emblem of chastity.

> Among the Romans, as an article of food, it is no less popular. Horace speaks repeatedly of it and in glowing terms:

> "Not the turkey nor the Asiatic wild fowl can come into my stomach more agreeably than the olive gathered from the richest branches of the tree?"

Again he says:

"That corner of the world smiles in my eye beyond all others, where the honey yields not to the Hymettian and the olive rivals the verdant Venafrian.

And alluding to its common use by both rich and poor, he says:

'However, all appearance of poverty is not entirely banished from the banquets of our nobles; for there is even at this day a place for paltry eggs and black olives,"

Shakspere often makes use of the olive in its emblematic sense:

"I hold the olive in my hand; my words are as full of peace as *matter."—Twelfth Night, i: 5.

"But peace puts forth her olive everywhere. King Henry 14., iv. 4. "I will use the olive with my sword."

Timon of Athens v: 4. "The time of universal peace is near; Prove this a prosperous day, the three-looked world

Shall bear the olive freely."

Andony and Cleopatra, iv:

And in King Heary VI., where that monarch offers to resign the goverment of his kingdom to Warwick, and the latter reproaches the king for not choosing Clarence instead, the latter modestly replies:

"No, Warwick, thou art worthy of the sway;

To three the Heavens in thy nativity Adjudged an olive branch and laurel

As likely to be blessed in peace and war," The olive has important qualities to recommend its use for the table—qualities which should certainly secure for it there a more general friendliness than it now possesses. One block-and we presume the only one-in the way, is that to which we have already referred, namely, that its taste is, at first, disagreeable to many people; but the palate soon gets over the squeanishness and in a little time and with very little practice learns to make them with intense relish.

But, laying aside their palatableae s, there is another consideration which has or ought to have too strong a claim upon our gastronomic affections to be ignored; I allude to their wholesomeness in spurring the digestive machinery whenever it is init does; for he will find hidden there, not | In S. on f wrothths of the transactions only an amount of delicrousness he hate dreams of, but also more r paring and Inbrigating material for his weakened in retman, than in all the pills and medical a draughts that were ever invented for the stomach to e monet.

I would also state for his edification has a series task months that, in the south of Europe where the olive is extensively used as an article food, indigestion is scarcely ever heard. is fact, so little known that the world itself has no compr hensible meaning. He must take this, however, as hears visual ence, for I speak it not of my own kin wo edge. Still, from personal experience the wholesomeness of the care, I am pr pared and willing to blivve it mys if and it can work no serious many for the dyspeptic to do likewise.

German Phylluxera Laws.

It may be of interest to reprint Mr. May (3P that each basis, Leichtlin's rules for importing points it Germany, as published in the I state Mouthly for Grand Titerests & good ture. The directions are specifically for up to the Positio Coast by the discovery that England, but will apply to Am reasegree'y as well:

plants in cases, not in bask ts, to pack och and give him instructions how to forward, this ly suppress 1. whether by freight, express, or man,

Mr. Leichthn says that he knows from experience that in following these directions give with pleasure if needed,

BI SINESS CREDIT.

The Grocers J. ora; T. re- ii, the following article, shows how bing a man is trusted in other countries:

In France a four menths' acceptance is required to be sent in settlement of the in-

In Italy but little credit business is done, and none without good scounty being given.

from four to five months after the delivery of the goods.

nace a year. June 30th is the day asually fixed for the payments.

In England a payment of the price of goods delivered is required at the coll of three months, dating from the day of ships

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Qub as is ston best contribute no mad iv on deg it be produced in that see then, went they are noticely obliterate it was "Whoever wishes to import plants from the ore rest tolories. The producers of England must instruct the nursery sate sliq the general arrive are very indignant that such a state of things should be permutted plant with its root ball separately and to exist, and are calling londly for the entightly, so that they will not shake and from at of the law in regard to fool adult loosen, and to enable the inspect rate e.g. raten. It is said that a large quantity amine without injury to the contents the manifecture estuff is being said as pur-Ship through Ilse Sutton & Co., pareds a x. Carterian circuit which contains a very press, or Best, Riby & Co., Hell ra Viac state in the fithe real article, in st of th duct, London, or any of their ag nis in the staff I shall imposed of cotton seed oil and country who connect with Vhssingen, A., 'arl. The genuine article is worth from \$4 freight suffers delay at Vissingen. Let the to \$0 a go lon, while the imported adult r shipper mark packages with the no. bid act. at distufficin be had in any quantity at to dress of consignee, in care of T. T. Niessen, whits a gallon. The great difference in general agent, Kuldenkirchen, and prefix proce threatens to utterly destroy trade in before consignor's domicile the word cars of 1 minute article, unless something i-(from), which are required enstomed as the bone specific to put a stop to the deception formalities. If the consignous live in Hell. The probabilities of live oil buls fair to bebroun, the address should be it, i. N. N. I came on the backing industries of the ans Heilbronn, care of T. T. Niessen, gen. Pacific Cost, and it was thought that Calieral agent, Kaldenkirchen. Fina y e no forma world be able to supply all the elisigner must write to T. F. Niessen, Kardene required for American consumption. For kirchen, explaining that he is ready to pay the 2 d left in trade it is to be hoped that for the phylloxera examination expenses the sale of the spurious article will be effective.

POWLETCE PUMPS.

The very sitted tive held interesting disas given the forwarding of plants will be perly in the machinery hall of the Mechanswift, prompt, and roas in d.b. Any further it's Fair, by Byren Jackson, of his line of information on the subject he says he will arrighting machinery lengths, boiler and pumps is worth the careful attention of ir r .1 rs who have land to irrigate or reclaim, and is a practical demonstration fither appoints of the Jackson Whirlpool Centrifugal pump, he re aloquent than figures, and more offerive than language. Of the two pumps of this design shown by Mr. Jackson, he throws about 500, and the other was gallons per minute, and the water is made to fall in various beautiful and polasing shapes, but what at ence strik-In Cuba the time fixed for payment is the practical man, who looks into the details is the fact of water and the comon y with which, by no ans of modern and improved. In the Bermulas accounts are settled but methods, lands may be irrigated or re-

> These interested should not miss seeing Mr. Jockson, either at the Fair, or at his works (25 South street, San Francisco at which paid captes of his new and compact-back on Irragation and kindral solutes as cop a application,

let me say to the dyspeptic that if his taste. In Austro cert is scarcely possible to d. Austrition of the Grap Grow rs. does not now flourish for the olive half sizes with all clowing a largerolit. Wine Makers' Association of Conference and the should lose no time in cultivating it that which is as a young to six in this. S. F., on Tuesday, August 21st, at 41. The carash has who in Patrigal and kia Matters of special paters to a

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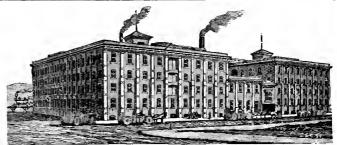
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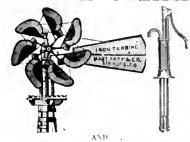
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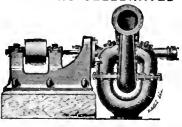
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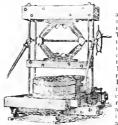
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	8 00 A	(K sa and Calistoga)	6.15
	S,30 A	Fast Mail for Ogden and East	10.45 /
	9.00 a	ForNiles, San Jose, Stockton, Galt, Tone, Sacramento, Marysville and Reil Bluff	5,45 (
	9,30 ₄	(Los Angeles Express, for) Fresno, and Los An-)	12.15
-	10 30 g 12,06 M		2.15
1.	1.00 P	For Haywards and Niles Sacramento River Stemmers	* 3.45 * 6.00 a
	3.00 ∘	t For Hatwards Niles and l	9.45 A
l	3.30 г	(San Jose) Central Atlantic Express, () for Ogden and East, (12 45 1
	4.60 p	For Stockton and Smilton; for Vallejo, Santa Resa and Calistoga	10.15 A
	1.17.7	For Sacramento, and for i	9.45 🛦
	1.30 p	For Niles, San Jose and (Livermore)	* 845 A
	5 30 p		7.45 A
	6 0-1 _P	Reddin', Portland, Paget	7.45 A
	8,00 p	Paso, New Orleans, and	8,45 p
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Devoted to Viticulture, Olive Culture, and other Productions. Manufactures and Commerce of the Pacific Coast.

VOL XX, NO 11

SAN FRANCISCO, AUGUST 31, 4888.

PRICE 15 CENTS

WINES.

The pracess of wine making in Francoain is as follows

BY JOHANN CARL LET HS.

The grapes are solved d where it is necessary; then rounded with a pronzed stick then the whole mass is thrown into a wiresieve, so that, by rid-ling, the juice and ber ries may be sifted through, and the stalks remain behind, then water is poure! npon the strained pulp, and, after standing twenty four hours, it is well pressed. This produces a wine of light quality, called Laner, or "drinking wine." The process The process of fermentation is rather retarded than hur ried on, because by slow fermentation, better wine is produced. In order to off of this objet, the barr is for containing the must are twice funnighted with brimstone, or charred with barrone alcohol-

In g neral, the crushed birties are put into a vat and covered with an loaken lid, The mash is stored up four times a day, and the crush pushed down into the wort After the first bernentation is over, the clear liquor is drawn off, and the residum in the vat is again put through, the press and the whole, interningled, is poured into barrels already prepar d by brimstone or alcohol. The vent is then clos d with a bong long (nough to be plunged us to the wine, which is perforated holes of about a finger's thickness, these are fitted with two corkes. As long as the fermentation is active one of these vents remains open, and after it has consolled hapertur s are closed with the cork spales. Every fortught each barrel is filled through one of these apertures, which is again closed, and the other is left open, we that the gas can escap-The refilling is done every fortnight for three years.

If the vines are warmly hous d in the vaults they are drawn off in May for the first time, and again on St. Bartholomew's day; but if they are in a cold atmosphere, the first drawing off is deferred to the lat ter end of September, and the second trib the end of November. Should fermentation ensue when the roses are in bloom. then one of the spile-holes is open. In the first year the barrel into which the wine is with half an ounce of brimstone, and one- and highly esteemed. eighth of an nunce is to be burned on the

the wine which is made from the bes, if they are in good condition. During the second and third years the wine is drawn off twice, and only half the quantity of brimstone used. In the fourth year the barrels are filled up every fourth week; and if the liquid is to be sold, the stock of it is clarified and drawn off. If, however, it is not intended to be brought temarket, it is no necessary to clarify it.

A light, drinkable wine can readily be male by separating the must which runs off first, and pouring it into a barr-1 which has been burned out the day before with half an ounce of brimstone lighted at the bung-In about twenty-four or thirty six hones afterward it is drawn off into another barrel, which has been burned out with mirit of wine, during which time a consulrable portion of the lees have settled. In cold weather, hor must should be added. and the barrel bunged up as above desembed.

In the middle of December, have ready a barrel burned out out with half an ounce of sulphur, and draw off the new wine into it. Clarify it in January with a quarter of an owner of isinglass; and in eight days after, burn one eighth of an onnce of sulbur in the vacuum caus d by first drawing if, some few galons to make an empty place for the sulphur fumes. The draw off again into another barrel, inside of which a marter of an ounce of britistone has been burned. Repeat this for a third time shortly before the roses are in bloom, and again for a fourth at Burtholomew, using a less and biss quanty of sulphur each time. During fermentation in the summur-time one of the small spile holes is to be left open. If the wine after September is protty clear, then the refilling of the barrels is only necessary once a fortnight.

OTHER GERMAN WINES

The Affenthaler wine, from Affenthal, near Buhl, in Baden, is a thick, strong and much prized red wine. The Ahrwine, from coption of "Licrima Christi", the tear of Ahr, in Rhenish Prussia, is red or of a red. Christ , the lest wine of Italy. dish color. It is a light, pleasant wine, and fit for use six months old, but it will not keep over three or four years. From to the taste. In the Upper Rivera the vines Wallporzheim and Rodens of they export (are trained upon olive trees, in Lower Rithe best kinds.

Bacharaceer wines both white and red to be drawn must be previously burned out | Rhine wines—are some what sweet and racy,

Boh-mian wines, both white and rod, are surface of the wine. This is also done to generally of a light quality. The red Mel- must, rum and wormwood, and Muscat, vasic,

taker is the best sort, muxt to the Aussiger. Both are white wines and a few others from Loutm-rizer and Bunzlaur districts. Throughout all Bohomia are only raised 26,000 casks of about fourteen gallons,

Grunburger, from Grunberg, in Silesia. The exports here amount to from 20,000 to 30,000 casks. Both the white and roll wines are of inferior quality, and sell for eight barillas, thalers per cask of fourteen gallons.

Harrdt wines, from Rhenish Bavaria, and the Palatinate. This is the name given to the wines which are made on the Harrdt Mountains: Nearly all of them are whitwines, pleasant to the palate, but not equal to the better kinds of Rhine wines,

Rhebish Bayaria contains 33,948 morgens of viney and plantation, and exports annual: y from 79,000 to 80,000 full rs. the fud-r s about s venteen gallons) of wine, the most preferable of which are worthy of note.

TITLETAN WINES.

This wines are used for home consumption. Having a very imperfect preparationthey will bear neither transportation nor long keeping. Upper Italy produces a considerable quantity; but exports a few pipes. Such is also the case with the Romagna and Nuples: Sicily exports yearly some 25 000 barr-Is (somma) worth 275,000. Savoy products 200,000 hoctolstres about 4,760,-000 gallons , mostly for home consumption. Fiazza pro luces 68,610 hectolities, and Predinant I 400,000 hectolities, which remain in the country, becoming vinegar if kept over a year. Parms Prazenza, 415,000. heetelitres. Tuscany, 1.257,000 hectolitres. Sardinia exports some wine,

The Italiaus let their vines run up on mullerry and elimitrees, where the shade pury of their wines, which, though swort when new, sour to vince it in a short time The best kind of grapes grow at Albano, eight hours' risk from Rome, with the ex-

Brescia. The wines from Rive ra and the o ealled Tuscolano are light and agreeable viers on fences six feet high

Chambery has very good red wines, the best in Savor.

Elba. This island furnishes two distinguished wines. Abstico, made of boiled and red wines, which often sell for Mal-

A'l the others are very inferior kinds.

Tiderno is a Neap ditan wine, high red, thick, and somewhat sweet, but fiery.

Genoa exports some red wine of a moddle quality, mostly from Fortesa, Novi and Voghera. One barilla contains 74/22/100 litres (French measure), One mezzasolla two

Griante, on the Lake of Como, has a light but savery wine.

The Lapari Islands produce, besides many ruisins which are exported, the so-called Militasis, an amb recolored wine, savory, and leaving in the mouth a sweet-after taste. The choicest grapes are selected, and left spread in the sun from eight to to ten days. le for being pressed. Cut there are only some two thousand barrels produced. The other kinds, although of a biss noble quality, are nevertheless d void of spirit, are of a pleasing tiste, and bear keeping for years, Though some keep the must in tarred skins, he wine loses after a while, in the barrels, the small contracted from the skins.

Milan has, on Lake Como, at Belaggio and Brianza, pretty good wines, around Pavia but poor ones, with the exception of an effervescent wine resembling in a measure, the champagne. All the produce of Milan is not quite adequate, for home, consumption. The quarters contains meanly six litres the mist two quarteres, the stars four, and the birila twelve.

Marsalla, in Western Stelly, produces a similar, but inferior wine of that of Maderia, and exports a great deal to America, under the name of Maderia.

Moden's produces very dark wines, tolrably good, but poor in spirits. The best prevents a part of ripening, to the great in- of this kind is produced at Rubina and Supelo.

In Tuscany, the Monte Pulciano is a strong, spirituous, red wine.

The wines of Naples are mostly sweet, On the Mount Vestisius three kinds of wine are made. I. Lacrima Christi, the less sweet wine of this country -of a fine red color, and of an excellent taste and bouquet. Very little of it is made, and this goes mostly into the cellars of the king, therefore that in trade is mostly spurious

2. Muscut, or an amber color, with a fine taste and bouquet, 3, Greek, a kind of Malvasie. Puzzuolo and Baja have white

Calabaria produces good Muscat wims, mostly at Carigliano and the enviros of Tarento. The wine-measure is the burilla of forty-two and a half litres; twelve barillas make one batta, or about one hundred and twenty-two and a half gallons: two battas, one careo,

Piedmont produces keen, but sweet and dark-colored red wines, which mostly som in August or September, turn next year into vinegar. But some wines form an except ion to this general rule, when more careful wine-growers observe a judicious procedure The best wines are made in Asti and Chaumont. Albahas also some good, but not strong wines. Gatinara, Masserano, and the red wines of Biella keep better. Montferrat has distinguished white and red wines, mostly those of Casal, fifteen leagues east of Thrin There the rabo has about two gallons, the brenea six rubos, and the carro (a wagou-load) ten brentas.

Puzzuolo, a village in Naples, raises red wines similar in taste to the inferior qualities of Bordeaux; but it bears transportation by sea, and finds [ready markets in Holland, Hamburg, America, etc.

In the Romsgni, the grape-vines are trained upon elm-trees; and, for this season, they do not ripen always; and, by careless preparation, the wines are bad, and keep rarely over a few moths. The wines from Albino and Orvicto are exceptions, The latter place produces a tenable red wine, and a white Muscut with a good bonquet and a balsamic perfume, but of not long keeping. Farnese and Terni have also some good wines. At Rome, the barilla has about eleven gullons English, and the botta sixteen harillas.

Sardinia sends her wines mostly by Cagliari. She has Malvasie of Sorso, Posa Alghiera, Rasco, amber-colored, with a fine bouquet: Giro, sweet, but not spirituous somewhat resembling the Tinto of Alicante. The wines of Bosa, Saffari and Ogliastra are dark red and pretty strong; as a general rule, they are more like the wines of Spain than those of France. Oanneso, Monsco and Garnaccia, send their wines, under the name of Malvasie, to Holland and other northern places. The best wines are kept in earthen vessels, containing about five or six gallons English.

Sicily keeps her common wines, but sends some of her sweet ones abroad. Syracuse supplies good red and white wines, of sweet aromatic taste. The first is pale red and the white one amber-colored. Mascoli and Mazara have quite good red wines: Catanea has strong ones of a tarry taste, which are consumed mostly at home. The wines of Sicily are of a first-rate odor and good taste. but are from the beginning badly managed, and therefore do not keep long. The grapes begin to ripen in June, and the vintage commences in September. One thousand vines give from one and a quarter to four pipes of wine. There are cultivated for wine-making only nineteen species of grapes, of which the best are the Cibibbo, Carmola, Greek Muscat-the dry and the winter grape. In the Lipari Islands the vines are kept high, as in Sicily; they cut clusters at the end of August, keep the grapes spread in the sun for from six to eight days, sprinkle them over with lye to neutralize the acidity, and then pack the dry raisins for exportation.

(To be continued.)

THE MERCHANT is largely circulated in the Hawaiian Islands.

WINE MIN IN COUNCIL.

The meeting of the Wine Makers' Association of California at Irving Hall was called to order on Tuesday last by I. G. DeTurk

A communication was read from J. B. J. Portal, in which he stated that although it was impossible for him to be present at the meeting, he desired to say a few words through his letter in regard to the causes of depreciated prices in California grapes and wines, and to submit a plan of his own for keeping up values. "We hear," he writes, "here and there, the cry of a San Francisco ring controlling everything; they are even unjustly credited with having caused the present panic in prices of grapes. If they are strongly organized for their mutual protection it is perfectly legitimate, and we can't help approving them in so doing. Have we not the same privilege they have Have we not collectively as much more brain power and capital to organize and do likewise? Surely we cannot throw all the blame of our present trouble on them; as they are also controlled by the two great factors of the mercautile world-demand and supply, and here merchants and growers meet the same issue. Our wines leave the grower at ruinous figures; the hones, merchant that sells them pure gets but a small profit: it is therefore the retailer that gets the fat goose and makes the disaster. He must make from 200 to 5.0 per cent profit, making the most ordinary beveraga luxury, which in my opinion is our most tormidable enemy. I would propose for your consideration to double the consumption in this State first, and then go farther East. This State consumes nearly 3,000,000 annually; East, about 6,000,000 annually. We produce on an average about 15,000,000, making our over-production 6,000,000 anmually, which is too much. Our hotels and restaurants and boarding-houses hardly know what our California wine is, or if they keep any they keep them at such figures that ordinary consumers do not use it at all, who are the very ones who will make real increase and consumption. Let a proper committee be selected and pay them well to canvass San Francisco See that all eating-houses have good, pure wines. Grade them; sell to them low, with conditions that they shall retail them at such , prices that the masses can have a half-bottle, ordinary, at a 25-cent meal, etc. Prove to the hotel-keeper that wine can be put on the hotel table cheaper than tea, coffee or chocolate. Let another committee see that the retailers in turn do the same, and if they refuse to do so, open a co-operative store, and sell native wines at prices so that the masses can drink it, and the grower can have for himself something to eat. Of course, this costs money and takes time. We have both of them. It costs money to carry on any enterprise.

made in Mr. Portal's letter to the effect that 6,000,000 gallons were produced in this State. He ventured to say that in the entire State there were not 1,000,000 gallons under the vintage of 1886.

The communication was laid over for further consideration.

J. H. Wheeler theu took the floor and stated that, as the great question before the meeting was to regain the prices and prestige of California wine, he would start the ball rolling, so to speak, by giving his become worthless. views on the matter. He was of the opinion that the only way to reduce the overproduction was to dry the grapes. This re- bing them of their merita.

duction of the supply would have the effect of raising prices, and by next year everything would be in a healthy state. As he had heard no objections to the drying process, Mr. Wheeler said he would like to hear of any other schemes that might b available.

Mr. Estee related an incident which came to his notice while in the East recently. He went into a dealer's place who advertised California wine for sale. H asked for some of the wine and was aston ished to see the dealer draw it from a cask It was California claret without a doubt, but of a miserable, weak quality. The lester informed Mr. Estee that he had no use for wine that he could not keep on tap. Now, everybody knows that a good quality of claret cannot be kept in this manner While such wine was sold and in domand the better qualities were going to suff r.

A gentleman from Sonoma announce himself in favor of Mr. Wheeler's idea of lrying grapes to reduce the production. H said he was sure that as good wine could be made from dried grapes as from fres

Judge Stanley of Napa assured the meet ing that the cause of the depreciation wa the great quantity of bad wine on the ma ket. In the East it was impossible to fin my good California wine. The only really good California wine to be found there was sold under foreign labels,

G. deTurk took the liberty to address the meeting from the chair on the subject under discussion. He said that the poor wine was the great stumbling block in this State. both to the consumer and grower. But what shall be done to this poor wine? he asked. Mr. deTurk thought he saw a so Intion of the problem. Drying the grapes was only a temporary relief. His plan was to gather up all this inferior wine and distill it into brandy. That which was nufit for distillation should be turned into the gutter. In this way an open field would be left for the better qualities of wine,

Upon the conclusion of the Chairman's rémarks a recess was taken until 2 o'clock.

Charles Krug of Napa spoke in favor of drying grapes in order to reduce the production. He thought over-production was due to making too much poor wine rather than to the growing of too many grapes. He moved a committee be appointed to address a circular to grape-growers and winemakers, advising them to dry all over-production of grapes, and distill all inferior wines now in their possession and exhorting them to refrain from producing inferior qualities of wine in future. Carried unanimously.

Chairman De Turk was appointed one of the committee by vote of those present.

W. M. Braunhall addressed the meeting on the general condition of the wine busi-M. M. Estee objected to the statement ness. He said large quantities of dried and Zinfandel. grapes were used East during the winters. Most of these, however, come from Europe, though the California product was generally conceded to be superior and could command higher prices. California wines, however, had not the reputation they deserved, partly because unscrupulous makers and dealers persist in turning out an article for what is known as "quick consumption," that is that the trade which sells wine before it has time to turn and

Another reason was that many dealers put foreign labels on their wines, thus rob-

A general discussion followed in which many theories were advanced, but the Chairman reminded the speakers that a remedy was what was needed and said wine should be given more prominence and r its own name.

After some further discussion the meeting adjourned.

THE GOVPEL OF THE GRAPE.

And it came to pass, when Kate, suriam of Field had made acrend of communing with viticulturists, she departed thence to teach and to preach in their cities.

Now when the scribe had read in the prints the deeds of Kate, he sent one of of his reporters,

And said unto her, Art thou she that should come, or do we look for another?

Kate answered and said unto him, Go and show the scribe thas othings which we to hear and seed

The bland shall recive their sight, and he tipsy walk, the sats shall be cleaned, and the bush is h ar, the drunk shall be aised up and tire bams have the gospel of he grape preached to them,

And fortunate is he, whoseever shall not e offended in me.

He that bath ears to bear, let him hearken.

Now in what temper do I find this genration? It is like unto gin-tipplers sitting in the saloons, and speaking unto their 6-Hows.

And crying, Ye have uncorked to us and we have all smiled; ye have plugged up the jugs, and we have all mourned.

But the agent came bringing jnice unfortified, and you say, He hath a devil.

The SUN of to-day may deliver to them what I say, Behold a nation of whisky bloats, and lovers of brandy smashes, the enemies of pure liquors and of autorified wines. But wisdom is justified of her children

Then began she to upraid the cities wherein liquids of powerful spirit were made, because they stopped il not.

Woe unto thee, Peoria! Woe unto thee. Louisville! for if the wicked works, which were done in you, had been done in Napa or Sonoma, they would have been covered long ago by sackcloth and ashes.

But I say nuto, It shall be more profitable for Napa and Sonoma at the bar of the future, than for you.

And thou, intoxication which are exalted above moderation, shalt be brought to nought; for if the many firms, that have worked for thee, had worked for temperance, they would have had a bonanza till the last day.

No man can tipple two liquors; for either he will hate the one, and love the other; or else he will hold to the one, and despise the other. Ye cannot stomach corn juice

Therefore, 1 say unto you, Take good thought for your throat; what ye shall swallow, of what vine it is made and the state from whence it comes.

Is not the health more than appetite, and the wits than sprees?

Behold the people of California: for they drink wine. Neither do they atumble, nor gather themselves into jails, for the wine in their demijohns is unfortified. And thus it is in the land.

Therefore take good thought saying, What wine shall we drink? And beware that its bouquet has no spirit, for this is the gospel of the grape .- San Diego Sun,

SOUTHERN GRAPE-GROWING.

dustry in this State, so full of bright prompound will destroy their vitality? What ise during the past deade, is our only apology, says the Cotton Physic, for pursuing the questions which aff et it. If there were no what success? We are sure that if the insuch thing as "rot" in our vineyards the husiness would grow to one of great magni- the true diagnosis of the disease and labor tude in a very few years, and become the toward the discovery of an effective remmeans of profitable employm at to thousands of people, as well as the source of a ward; Farmer grape-growers who have great income to the State, mismuch as a larg · proportion of the products of the vine yards would supply others than the home market. But the ret is here in several forms, and with a vengeance. There are those who believe that it will not stay long, that it is a thing that will come and go, that while the grape crop has roll d body this that of applying a preventive of caustics year it may not ret at all n xt year, and we may not hear of it again for a long term of years, etc. It is characteristic of Luman preventive of grape rot, and we again urge nature to take the more hopeful view of all troubles, and we may wish for good things. with all carnestness, yet wish in vain. In ments next year. Should it follow that no this matter the ordy hope teat is worth anything is that which rests upon some sort of a foundation. It must be a practical hopand a reasonable one, backed up by intelligently directed effort on the part of those most interested. We are sorry we cannot share the prevailing hip that grape rot will go as it came, sol by of its own accord or by due course of nature. It we indulged this hope we would put in this phras ology "We hope the seasons will change, and that those continued wet, saitry spells of rain and must which come every year in early summer, which germinate the spores of fungi and merease them by millions and billion will not come any more." If we could realize this hope we would realize a condition so unfavorable to furgus growth that gripe rot would not his ly trouble us. But it is idle to hope for this condition to "turn np." We must pull off our costs and jurn up counter conditions if we expect to suce asfully combat the cyclith it now besets as and since sel in the production of fine crops of grap s .. W. must get between our grapes and the spores of the fungi with a loaded gun. We must besiege the enemy and starve him out. We must dislodge and rout him, horse, foot and drugoon, and rid the smesard of his prisoners. Some prople may smale, but we are hopeful that this will be accomplished. Sei needs moving its battern's nearer and nearer and aiming with greater precision its improved implements of war, while the invid i's strongholds are under the constant serum v of the nateroscope, and his weak and valuerable points are becoming more and more exposed to effective attack. We may hope for his final and overwholming defeat. To gain so important a victory at is the duty of every grape-grower to enlist in the service. In order to do so be must come to an intelligent understanding of the nature of the fight, and use all his ingenuity toward the desired end.

He must discard theories, such as " too much sap in the vine," "something the matter with the root of the vine," etc., and accept the actual, demonstrated, proved facts of science, and go to work on the infest the vineyard. These spores are inthem out with a bellows. They must be contact with these their only means of life, | selves. They feed upon the assimilated in California, has been extensively operated

or they must be deprived of the power to sprout and groy. This is the question with The importance of the grape growing in the grape grower. What substance or commeans or agence's have the grape growers of South Carolina ever tried, and with telligent growers of the State will accept edy, their efforts will not be without reconversed with the writer on the subject show a natural aptness for the work of fighting fungi. One of them at once suggested a strong wash of lye soup to be applied to the entire vine. Another thought of earbolic soap or earbolic acid. It is evident that they grasp the proper idea, or disinfectant properties. Something of this kind will be found to be the remedy or that all grape-growers, even those who have but a few vines, prepare for experixperiment has proved successful, we prediet that every one will be rewarded for his labor, as suggested by Mr. Wanner, of Walhalla, by a closer study of his vines and his business and find himself better prepared for hopeful work in future. Valnable information as to other fruits and other crops will come with every effort in this line.

This paper has devoted much of its space to the elucidation of this subject, belowing that good r sults will follow the dissemination of useful information, such as will keep front growers "in the straightforward road," or on the right track. In this direct tion the principal obstacles encountered are the groundless "theories" of men of intelligence and influence who put forward, their thoughtless fincies rather than plausible and reasonable theories. These gentlemen. we say in kindly spirit, are not theorists but obstructionists. They hind rathe progr. ss of knowledge and enlightenment when they declare themselves opposed to and disb if vers in "the fungi th ory," "the spontheory," as they term it, when they discuss the cause of the rot. We can only say of those of this turn of mind that they are woefully b hand the progress of the day, and will find themselv s "nowhere" when they and rtake to apset the truths which the my speations of ser nee have unveiled.

Not only for the purpose of substantution, but in order that our readers may know that we are discussing what is not a theory but a ract, we give them what scientific authority has to say on the subject.

U. S. DEP'T OF AGRICULTURE,

SECRETARY OF VEGETABLE PATROLOGY.

Vonrabservations relative to the various rot-producing fungi are very clear and correct. Mr. Wanner does not appear to fully understand the nature of these pests. To be sure, we have not yet a full knowledge of their nabits, they are small and hard to keep in sight, but there is nothing mysterious about them. The fungus that by its growth in the berries causes Blackrot, and the fungi which in a like manner producspores or seeds of the different fungi that the other recognized forms of grape rot, are all plants, possessing individual characters our own vineyards by the nultions. We by which the botanist readily distinguishes cannot harvest them and we cannot blow the one from the other. They may be classed with the weeds which grow from prevented from germinating on the vine the soil about the vines, only it is their and its fruit, they must be hindered from habit to grow directly on the vines them-

assumilating food for themselves. By this United States having been heavy importers, habit they destroy the living tissues in paying fancy prices for the product, which they grow, and the "rot" follows (The most of heate part of all these fungi is to extract the jues from the fruit and ar the spores from which they grow, as replace it with sugar syrup, which, upon higher plants grow from solds.

There is nothing mysterious in thes. spores, excepting the principle of life, they are only very small and very numerous, They are lighter than thistle down, and the gentlest current of air serves to waft, them from place to place. They may fad with acquired only by practice. The several moisture and germinate anywhere, but they quickly perish on all surfaces excepting those of the vine. On the gron parts of the vine (the berries included the filements produced in germination quickly penetrate to the tissues within where suitable food is found for their continued In a few days (raply less than four, or it may be more than a month - the effect off this growth becomes visible through the changes produced -in the case of Pic, sa'espora Bedwellia, we name these changes "Grapt-leaf spot diseas" and Blackrot "

thar only purpose in applying the sulphate of copper compounds to the green parts of the vine is to interpose between the surfaces of these parts and the spores which may light upon them, a substance which will prevent their germination or destroy the yet more delicate product of germination. this rests the principle of success in the application of solutions or powd rs for com bating the Peronospora or the Physalospora. In the treatment of the cidium or Powd ry Milds with case is different, as I have fre quently explained in my official reports.

In connection with the article in the Cotto the letter quoted on page 44 of Bull, No. 5 of this Division. Some of the points made by Mr. Wanner are there considered. Also see observation near the middle of page 64.

The diseased berries and leaves sent with your favor of the 7th inst, are affected both with brown and blick rots. I see no mildew on the leaves, however. Some few of when this has reached a certain stage the the berries have been attacked by the fun-fruit and syrup is heated to a beiling deons of Authraenese.

may enter the tissues of the host, make a limited growth, and then remain inactive for a long time, t' rtain conditions, difficult to and estand or determine, impart to it new vigor aft it a time and a sufficient development takes places to produce the external changes which we disignate as one or the other form of rot

Some of the young shoots you's nd have been attacked by Anthracoose, others by black rot. These are made by the latter nearly always have on their surfaces little the berrus.

> Very respectfully. F. LANSON SCHINNER

A SECRET DIVERSED

For a long time the method of preparing rystalized fruits has been kept secret, but cyrics offered by the State Board of Horticulture has chested an explanation of the process from J. J. Pratt, Superintendent of the Satter Canning Company, who makes the following statement

The process of preserving fruit in a cry stalized or glaced form is attracting consid-rable attention at the present time. This process, although comparatively new

food of the vine, for they are meapable of in southwestern France for years, the

The process is quite sample. The theory hardening, preserves the fruit from decay and at the same time retains the natural shape of the fruit. All kinds of fruit are capable of bang preserved and raths press. Though the method is very simple there is a certain skill required that is successive steps in the process are about as

First the same care in selecting and graphing the fruit should be taken as for canning, that is, the fruit should be all of one siz, and as in ar the same ripeness as possible. The exact degree of upeness is of great importance, which is at stage when fruit is best for canning. Peaches, pears, ete, are pared and cut in halves, as for canmug; plums, chernes, etc., are pitted. The fruit having thus been carefully prepared. is put in a basket or a backet with a perfor it of bottom, and immersed in boiling water. The object of this is to dilute and extract the price of the fruit. The length of time the fruit is imm as I is the most important part of the process. If left too long, it is over cooked and becomes soft; if not immersed long enough, the price is not sufficiently extracted, which prevents a perfeet absorbtion of the sugar.

After the fruit has been thus scalded and clowed to cool, it can be again assorted as to softness. The next step is the syrup, which is made of white sugar and water. The softer the fruit the heavier the syrup required. Ordinarily about seventy deton Plant, allow me to call your attention grees Balling's saccharometer is about the proper weight for the syrup. The trut is then placed in earthen pans, and covered with the syrup, where it is left to remain about a week. The sugar enters the fruit and displaces what juice remains after the sealding process.

The fruit now requires careful watching, as fermentation will soon take place, and gree, which checks fermentation. The As I have intimated above, the fungus | heating process should be repeated as often as necessary for about six weeks,

The fruit is then taken out of the syrup and wished in clean water, and is then ready to be either glaced or crystalized, as the operator may wish. If glacid, the front is shipped in thick sugar and left to harden quickly in the open air. If it is to be crystalized, lip in the same kind of sprup, but it is made to harden slowly, tuns eausing the sugar which covers the fruit to crystalize. The fruit is now ready for boxing and shipping. Fruit thus prepared black pustulus like those which occur on will keep in any climate and stand transportation.

> THE vineyardists of Yolo are working together. They operate a win-ry at which they commenced crushing grapes last week, The corporation handles almost exclusively their own grapes and put upon the market the wipes manufactured therefrom. company has now 35,000 gail as of wine from the '87 vintage, which they are holding for better prices than are now obtains. ble. This winery does not quote prices for grapes. The idea of the company is to perput its stockhold is to participate in the profits of wine-making as well as of g rape

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NAPA GRAPE-GROWERS.

J. H. Wheeler, Chief Executive Officer of the State Viticultural Society, addressing a meeting of grape-growers at Calistoga, is recently reported as follows:

At the commencement of his remarks, he said that he had not seen in his travels about the State within the past few weeks vines looking so green and fresh as in Napa Valley. But he said that the warm weather here as elsewhere had done and was doing a great deal of damage. In Livermore Valley the loss has been very great. The grape-growers there are poor. They combined for protection. Offered half their crop for \$18,00 per ton. Previous to the agitation a wine-maker there offered \$8,00 per tou, but he is glad to oblain 400 tons now at \$15.00 per ton. The other winery there pays the price. Growers are selling only half their crop.

It is difficult he said to get men to co-operate when times are hard. But co-operatiou nuder such circumstances as these destroys competition among growers, and results in their benefit. This they have done at Sacramento. Many tous of grapes will be dried there. About Fresno ucarly all are drying-for raisius and other purposes. Last year 500 lons of dried Zinfandels sold there for 31/2 cents per pound. This result has induced growers there to dry this year.

The drying of grapes he said, takes so many from market, nets the owner a fair price, decreases the wine yield and will assist, if followed up, in getting better prices a couple of years hence. The wine yield of the State will not be greater than last year; the demand at the east is increasing, no vineyards are being planted, and with a reduction of the wine yield a couple of years, drying will again bring up prices, when grapes can be sold as usual, if the grower desires.

Mr. Wheeler said that inferior wines should not be sold. They should by all means be made into brandy, and co-operalive distilleries should be used for this purpose in the wine districts. Some capital, however, is needed.

But in drying grapes no capital is required, hence the speaker advocated drying. For this purpose grapes should have 25 per cent sugar-more the better; should be dried on the ground; gravel ts best. The speaker gave abundant and conclusive proof in favor of drying on the ground. Take the large bunches and lay in rows; how wide the speaker did not state. But a plat of ground 20x24 ft. will take a ton of grapes, less room being necessary as they dry. He said that loose grapes and small bunches could be dried ou trays, sack cloth-or any other way possible. recommenced the covering at night with oiled Manilla paper-obtainable in large wide rolls in Sau Francisco at very low cost. It has been used very successfully; will last two or three years; keeps off dew and raiu, and hastens drying very much; grapes dry in 15 to 25 days. Buuches dry better and sooner on the vines, if not too much foliage, by pinching or breaking the atems to stop flow of sap. Rain will not injure them there. Grape bunches when picked up and dipped in lye, dry sooner and look much lighter and better, but when dipped cannot be put upon the ground immediately after. Grapes are dry when no juice comes from them, or when it is thicksomewhat lide jelly.

Mission and Malvoise are the best to dry. Burger will not do, for want of sugar.

After grapes are dry they must be stemmed. This may be done on a coarse screen; or for \$50 growers can unite and get a machine that will stem ten tons a

When dry and stemm d, the grapes are packed in cheap cotton sacks or bags without sorting,

Dry graps are used east by poor people in place of raisins. There is also a demand in mining and other camps in the territor, ies. But the chief demand is from the eastern cities for wine making, the dried grapes taking the place of still cheaper substitutes, and these grapes make passably good wise-Mr. Husmanu says, better than condensed must,

The dried grapes can all be sold. They will bring cash down. Grapes are sold on time and wine is also the world over.

In conclusion he said that there should be concert of action; that a committee should be appointed to ascertain the numof tons of grapes in the district, and then to uisit wine-makers here and elsewhere to see what could be obtained per ton fo grapes; this to be done before action is taken about drying.

The following were chosen as the committee; J. Lang, R. Bennett, C. C. Jewell, C. P. McMerrick, F. A. Crouch.

The committee will attend to their required duties within a week, and report at a meeting of grape growers to be called

REEPING GRAPES FRESH.

The mere fact that in grape culture, whether early or late, the productions of the home grower panuot in any way be equaled by any sample from abroad is sufficient, observes the Horticultural Times, to show the necessity of keeping them in good condition as late in the season as possible. inasmuch as late grapes from December till May meet a ready sale, oftentimes at very high prices. In this country very little attention has been unid to the utilization and preservation of late fruit, and we hope that such an important point will receive more attention in the future than it has in the past. In every other country but our own this always forms an important feature in fruit culture for profit, and is always attended with very satisfactory results. With home-grown grapes and with the late productions of the hot-house, especially, the first thing to observe is that the grapes retain as much bloom as possible, and that each bunch be kept intact, and be prevented from coming in contact with anything that would rub the berries and disfigure them. Various well-known methods have been tried and are still in use, but the two following simple and effective systems may be utilized to great advantage, whether the grapes be grown for pleasure or profit, inasmuch as they both admit of the free circulation of an even temperature equally around each bunch, and prevent the same from rubbing against each other. In fact, among the many methods for keeping grapes in their natural state for use in winter there will none be found better than the simple ones here described.

The first method is to take new soap boxes, or any other box of about that size, and nail cleats on the inside of the ends or sides about one inch from the top, and between them bars at various distances, as required by the varying length of the bearing shoot cuttings. The bars are made by nailing a small strip on top of each. As

shears, and shorten them so that they will cut variety only five years of age which will go between the end of the box and the top part of the bar, resting on the bottom part, thus hanging the banches in their natural position. By this method the boxes can be haudled without shaking the shoots off the bars, carried to the light, each bunch examined as winter advances, decaying berries or bunches removed, and the best kept without any moldy taste which is so common when they are packed solid.

Another very simple and inexpensive plan will be found to answer admirably All that is required are two or more iron or wooden hoops, two lengths of wire to evary two hoops to hold them in position, and some string, and the contrivance is complete. When hung up it is the easiest thing in the world to trim out decayed or useless berries; in fact, the stock of grapes can be kept in good condition without even shifting the contrivance at all. At a recent horticultural meeting at Grimsby a member gave an account of his mode of preserving grapes till midwinter. He filled chees boxes with them and baried the boxes in the earth so as to totally exclude the air He then kept them till February. Ther is no doubt that the chief merit of thi mode was in giving the grapes a cool tem perature, excluding air corrents and preserving the coolness nuchanged. If the same conditions could be preserved in a fruit-room they would be kept equally well but in common practice they are more or less exposed to air or air currents, and to a changing degree of temperature. For burying them the soil should be compact, free from stone and with a perfect drainage. But, of course, this is not so simple, nor in fact, so effective as the two methods suggested above.

A FRESNO VINEYARD.

The greatest prerequisite for the construction of a readable item is to have something to write about, remarks the Republican. Our orchards and vineyards! What fruitful themes! One noticeable peculiarity in Fresno county is, that while a spirit of enterprise is everywhere apparent, very few of our vineyardists desire to sell. Without desiring to stand in the way of progress, our farmers are satisfied with their homes and do not wish to part with them. Knowing this we write with a greater freedom. When hospitality is extended for the sake of hospitality, and vineyardists facilitate the acquirement of knowledge with a view of aiding others, then is the reporter's duty a pleasaut one.

A short drive brought us yesterday to the home of Mr. J. M. Cory, who resides about a mile and a quarter from the center of the city, ann three-quarters of a mile from the city limits, to the southeast. A row of poplars first attracts our attention. The trees are between twenty-five and thirty feet in height and only six years old. Along the laue in front of Mr. Cory's there is a row of umbrella trees, the growth of which is surprising. They are but three years old, are from twelve to fifteen feet in height and as vigorous and healthful as trees well could be. Such a growth has never been met with, we dare say, outside of Freeno. Fan palms grow and apread in a way that would surprise any one unaccustomed to the rich soil of this truly wonderful it is said that through the efforts of this county.

But the crowning glory of Fresno is the Muscatel grape, and the growth we witlate as possible cut off the bearing shoots uessed at Mr. Cory's eclipses all past excontaining the bunches with pruning periences. We saw there vines of the mus-

in our judgment produce at least nine tons per acre this year. Not only one vine, but acres of them. The grapes are large, the banches are large, and they hang in massea all around the crown of the vine,

We also saw there vines only one year old that seemed as far advanced as ordinary vines three years of age. Upon these one-year-old vines were grapes enough to more than pay the expenses of putting them in and caring for the crop It is the most wonderful growth we have ever seen, exceeding anything ever noted in Napa. Santo Clara, Butte, Sau Bernardino, or any other county in the state. It would pay anyone who is interested in vines or in the growth of our county to go and look at Mr. Cory's one-year-old vineyard. He has eighty acres. Twenty a res are from three to five years old and sixty acres are but one vear old.

The care that has been exercised in the planting of this and other vineyards in the viciuity is notic able. The rows line in very direction. The absence of weeds dso attracts attention. Sub-irrigation by scepage, the handiest, most successful and jest plan in existence, tog ther with the alseuce of rain and the presence of sunshine, .llows the vines to grow uninterruptedly, thile weeds are easily kept out. Ground quirrels, which are so destructive to vinevards in Contra Costa, are here very scarce und in many places are absent altogether, A few rabbits get in, but they are kept pretty well killed off by the farmer boys, who are generally encouraged by the bestowal of a bouuty.

Mr. Cory appreciates the benefit of a country life and seems to have a way of persuading vines and trees to grow in au astonishing way. He credits his success to the wonderful climate and soil of sub-irrigated Fresno, but we think Mr. Cory is an artistic and practical vigueron.

What One Man Can Do.

A French physician named Raoul, who long dispensed drngs on a man-of-war, finding life very dull on board ship, stepped ontside his professional line a while ago to distinguish himself, and the results have been so noteworthy that the Paris Society of Commercial Geography has just honored him with one of its medals. It occurred to him that the useful products of Tahiti, that arge and lovely island of the Society Group in Polynesia, could be greatly increased by judicious importations from the flora of other countries. So he laid a considerable part of the world under contribution, and in course of time many hundreds of foreign plants were doing their best to take root in the soil of Tahiti. Among his collectious were rubber trees from Madagascar, ebony, teak, and red cedar from Australia, tobacco from Java and the Rio Grande, cotton from Georgia, hemp from Manile, cinnamou and nutmegs from the Maly Archipelago, grapes from Madeira and Teneriffe, coffee from Formosa, and a very large variety of grasses and fruit trees. He established a unrsery uear the chief town of Tahiti, and he has already proved that the larger part of his plants will succeed in this favored island. Grape culture, which he introduced, is already beginning to eurich the country, and man alone the aspects of the vegetable kingdom in Tahiti are undergoing a remarkable change for the better.

Subscribe for the MERCHANT.

A PROBERTION TONK

In the manufacture of patient medicines, says the Boston Journal of Houlth, there are degrees of bosen as just as in every other illegitimate business. The man who puts up a simple tonic costing a few cents per quart and advertis sat as a core for all diseases, is certainly lead enough. He robs the innocent purchas r, to be sub, but only of his money. Of a much greater crime are those guilty who put a deleterious or poisonous drug in their nostrutos, for they injure their victims both in health and poc ket. But either of these characters are innocent lambs, compared to the one who, under pretense of curing a victim of the opium or liquor habit, puts into his hands as a remedy for his disease a preparation containing the very substance which has caused his downfull. One can hardly find words adequate to describe such a monster and no exertion should be spared to expose his fradulent preparations. Only men who are lost to all sonse of shame can engage in such nefarious business; and when we find a woman who binds herself to such a trade, what must we be forced to think of ber? When women, to whom we turn for aid in our hour of sickness or affinction, offers us the poisoned cup under the pretext of ministering to our wants, then indeed, must we ask, "Is not our boasted civilization a failure?"

Let us see whether there is anything to condemn in the various preparations of Harriet Hubbard Ayer.

These preparations appeared quite suddealy upon the market, with lavish advertising accomponied by testimonials from well known men in all walks of life.

The following extract from the circular accompanying "Vita Nuova" will show the claims made for this nostrum:

This tonic is nothing more less than a wonderful remedy prepared from the prescription of one of the most eminent physicians in New York City, just exactly what he would give you if you needed a tonic or were troubled with any of the symptoms below enumerated and went to him for advice. This prescription was given to Mrs. Harriet Hubbard Ayer when she was very ill, as it has been given by the same physician to many other overworked people on the verge of nervous prostration Mrs. Ayer now offers it to you unchanged in any way, excepting that when Mrs. Ayer commenced to manufacture it for sale, she discovered that one of the ingredient, which is very expensive, is invariably adulterated. She went to first hands at once and made arrangements for a supply of this ingredient, which should be absolutely pure, as she is determided to maintain the quality in every ounce made. Go to the hearest drug store and bug a bottle of Vita Nurva (New life You will find that it tastes like a wite thirty years old, while positively free from alcohol or narcotics, and purely vegetable, and without the reactionary effects which reader many tonics worthless.

The circular goes on to say that the medicine is the "best, surest and safest" for any disease due to an impoverished condition of the blood, and then follows this definite statement.

It is a sure Specific for the Alcohol and Opium Habit, as the victim, by discontinuing the use of these articles, will, while taking Vita Nuova, escape the uncontrollable desire and longing for these horrible stimulants, and by excreising a little selfsee how these claims are born out by ana-

A bottle of the Vita Nuova gives, on opening, the characteristic smell of wine, which is confirmed by the taste and color, The liquid contained 15.75 per cent. of alcolol by volumn, and 12 per cent. of solid residue on evaporation, which consists mostly of sugar. This resplie tested by all the reagents for the various alka loids gave no r action, showing that the liquid is essentially port wine. But we can go further than this. From certain peculiarities of the residue it is evident that an attempt has been made to obtain a wine of some tonic property. But from the ignorant or faulty method of preparation, se small a quantity of the drug or drugs used remains in the finished product that it fails to give a reaction sufficiently distinct to identify it even with the most delicate reagents.

Comparing the amount of residue and its character with that obtained from genuthe imported port wines, it can be safely said that the wine used is native port, which may mean any strong sweet wine colored to iuntate the genuine article.

Here then is the famous tonic which clarifies the mind and stimulates its action. according to Delancy Nicoll; which brings prace and hope, according to Prof. David Swing, the divine; which is "well named new life," according to S. S. Cox; and which, in the words of Hon, Jacob Hess, is the most exhibitanting non-intoxicating tonic I have ever tried! Lawyer and elergyman, diplomat and politician, all join in singing the praises of chenp wine as a рапасен!

But, seriously, can any one believe for a moment that these men over lent their names to such a monstrous swindle? Whoever was bold enough to conceive and carry on such a trade, would not hesitate to use anybody's name or fame, if he thought it would advance his interests Knowing that no law can reach him, he continues on his path of deceit and thus he will continue until his patient and longsuffering victims rise up, join hands with their brethren, the dupes of various other quacks and quack medicines, and secure the enactment of suitable laws by which these sharks may receive their just deserts.

But to return to our Vita Nuova. As al ready quoted from the circular, this article is claimed to be positively free from alcohol. Compare this with the 15.75 per cent alcohol found by analysis and comment is unnecessary. This is a straight out and out misstatement, and when the quantity recommended is taken into account, is quite capable of producing intoxication The dose is three tablespoonfuls or an or dinary wineglassful three times a day, Now as this "tonic" contains about one-fifth of is volume of pure alcohol, this time table. spoonfuls would equal nearly two tablespoons fuls of alcohol, or more than a wine plassful; f straight whishey!

But this deception sinks into insignificance when we take up the next claim for this nos trum. "A sure specific for the ales but hatait " Imagine for a moment a victim of alcohol. who has by sheer force of will given up the intoxicating cup. Her ads in the newspapers of this wond rful tonic, which is 800 high'y recommended by well known people, control for a short time only, will find him- and hopes at last that he has found that farmers to look into

self entirely cured. Here we have direct which will restor his shattered nerves. The claims made for the "tonic," that it is absorbirst dose sends through his system the welllately free from alcohol and a sure specific remembered feeling of by-gone days and for the alcohol and opium habits. Let us trusting to the statement that it is non-if coholie the innount victim sirks onemore into his old halats, a victim to these remorseless robbers. Such a picture at pears very sail to the teacher, but he so at forgets it, unless he less, like the writer, had personal experience of just such a case, which was not however with the nostranund r discussion. It has always been a ques tion among lawyers, how far the chains of patent medicine quacks effer ground for a eriminal prosecution cl'infortunately, however, there can be people who for a consideration, will swear they have been cured by this man's "Sarsaparilla," or that man's "Discovery," or some other "medicine, and afford a loop-hole of escape from the responsibility of the articles. But in the case of Vita Nuova no such escape is possible. The distinct claim is made that it is non-alcoholic, and the invalid r lying upon that state ment pays his dollar for that which he could purch use in any store for one quarter that som. If this is not obtaining money by masteading the public, it comes so mean to it that no reasonable man can see any difference.

> The other articles of this same list = "Ro camier preparations" have also been sub-I cted to analysis, but as the space allotted for this week has already been overrun, the results will have to be deferred until the next number of the Journal. Two of these preparations contain a deadly poison, cor sive sublimate, which is forbible it to be sold in this State without a physician's proscription, and every reader of the Journal is cautioned most strongly against buying any of these articles.

A PROFITABLE TRANSACTION

Boyd & De Vine has purchased of S. C. Evans his raisin crop, comprising 105 acres, for the round sum of \$10,000 on the vines. This is about \$100 per acre. We understand from Mr. Evans that it has cost about \$25 per acre, ger year, for water, care and cultivation, leaving \$75 net per acre. This price was based somewhat upon the yield the past two years, which has been something over 8,000 boxes.

The crop this year is very fine in quantity and quality, and at least from 25 to 50 per cent larger than before. Mr. Exans says that after examining his vine yards theroughly, and finding the buyers were paying \$17,50 per ton for small ranches, and wishing to avoid the trouble and annoyance attending the picking, curing and packing, he made up his mind he would sell his crop for \$10,000, and if no purchaser took him at this price he would sell at the best offer per ton on the vine. He submitted this proposal to the several buyers and received bids at from \$18 to \$20 per ton on vines. Boyd and De Vine closed at the above price for the lot.

Thus it will be seen that experience gives a criterion for estimates of production so as to I ring buyer and producer together. Mr. Evans says that the truit increhant should handle the graps from the time they are picked, so as to insure proper curing, assorting and packing. There is quite a quantity of land yet in Riversi'h which can be purchased for \$250 per acr. with the lest water-right in South in Califorma, which in five years can be made to produce equal to this deal of Mr. Evars Here is a pointer for some of our eastern

BIACKROT AND MILDEW,

Information recently received from Vineand, New Jorsey, is to the effect, that the My riments which have been conducted the r wint wason on Colonel A. W. Pearson's fruit farm under the supervision of the United States Government, have resulted in some valuable and important discoveries. particularly regarding the culture of the grape. Professor Scribner of the Agriculturn! Department, who has spent some days there, expressed satisfaction as to the results already attained. It has been demonstrated that spraying the vines frequently with a solution of sulphate of copper and lime, known as "Bordeaux mixture," will effectnally prevent both mildew and black rot. The spraying was begun on the Pearson farm on May 28, and effectually prevented the rot where the clusters were exposed to the spray. Microscopic examination reyealed the fact that the berries, after spraying, were cheased by a metallic coating, which protects the grape until washed off by heavy rains or cracked by growth. The department recommends that the spraying be comminced a week or two previous to blo ming or about the Middle of May, Expetiments are being made with a view to unding preventives of fungus on the foliage of apples, pears and chernes. The "Bordeaux mixture is pripared as follows, Disselve 16 lbs, of sulphate of copper in 22 gallons of water, in another vessel slake 30 lbs, of lime in six gallons of water. When the latter mixture has cooled, it is slowly pour dinto the copper solution, care being taken to mix the fluids thoroughly by constant stirring. It is well to have this compound prepared some days before it is required for use. It should be well stirred before applying. Some have reduced the ingredients to two pounds of sulphate of copper and two pounds of lime to 22 gallous of water, and have obtained good results. Well made pumps with specially constructed nozzh s are required for the application of this compound, unless we resort to the tedions and wasteful method of using brooms or wisps made of sleuder twigs, which ire dipped into the compound and then switched right and left so as to apray

SUMMER DIEF

The best dist for hot weather is one composed chardy of fruits, grain and milk. An orange or two before breakfast is an excellent means of preparing the stomach for morning up al, as it cleaners away the muus with which the mucous membrane lining the stomach becomes covered when it has been empty for some time. Two meals are amply sufficient for the majority of persons, in the summer season. If anything is taken is taken at night, it should be hut very little, -a large front, a glass of milk, a little rice with milk, or something equalsimple, and that should be caten early. We should remember that during the summer season less food is required than during the cold weather, when so much food is needed to be usel as fuel to maintain the heat of the body - Good Heath,

THE vidroy to strongs that parties in that section interest d in the schome of drying wine artiple, as it to be of escape from runously low prices, are forling ensung Hay the fortifict a long fruit firm d Sin Francisco has a ripos ubative in the field floring to mis a potent for dried grapes in alvance. This is should to \$20 per ton gross for the undred grapes.

THE LIMIT OF ALCOHOL

The limit of alcohol allowed for officinal wines is 12 per cent, by weight, which appears to be confirmed by the examination made by the National Department of Agriculture, at Washington, which publishes the following statement:

Any wine with a higher percentage of alcohol than fifteen per cent. by volume (twelve per cent. by weight) can be safely declared to be fortified, for it has been shown that fermentation is arrested when the alcoholic content reaches about that point.

Notwithstanding this statement, it is not nncommon to find wines in which the amount of alcohol found is frequently as 20 per cent, by weight, and occasionally a higher amount, instead of 12 per cent.

Attention is especially called to the statement of the analyst of drugs with reference to this subject.

From the report just quoted it appears that adulteration of wines has kept pace in this country with the rapid growth of their production.

The comparative consumption of American and foreign wines in the United States is shown by the following figurers:

WINES CONSUMED IN THE UNITED STATES.

Year Ending June 30.	Wines of Domestic Product	Imported Wines entered for Consumption	Total.
	Gallons.	Gallens.	Gallons.
1840	124,734	4,748,362	5,873,096
	221,249	6,094,622	6.315,871
1860,	1,860,008	9,199,133	11,059,141
	3,659,518	9,165,549	12,225,067
1880	23,298,940	5,030,601	28,329,541
1886	17,366,303	4,700,827	22,067,220

The following table represents the percentage of adulteration found in wines ex amined by the State Board with referance to the requirements of the Pharmacopoeia;

The two latter items do not necessarily represident the same samples.

Upon this standard all of the samples of port and Madeira examined by the analyst of the Board were found to be fortified. without exception.

The Board receives the valuable monthly reports of the Paris Municipal Laboratory, giving the summary of their examinations for each month. From these reports the following table is complied, which indicates the extent of adulteration found in the wines offered for sale in the city of Paris during the last six months of 1887.

469
•
13
63
35
358
894
530
561
1250
3542
Total

The following authentic information relative to the adulteration of sherry wine is copied from a recent letter written by the Mayor of Jerez de la Frontera, the seat of the sherry wine district:

It is a fact that more butts are exported every year under the name of sherry than the district producers, and yet the legitimate product has no sale, and the spurious wines usurping their titles injure the fame acquired through centuries.

The great variety of brands of complex mixtures of names and imitation, has introduced the greatest confusion in the business. Certain cellars look like mysterious laboratories, whose secrets nobody is allowed to penetrate, and hence comes that infinite amount of prices. What can be assured is, that the finer grades—the genuine sherry—have necessarily only to maintain a value which will never allow it to become confounded with those liquids which are to-day the principal brands for exportation.

The subject of the importation of German alcohol and its use in fortifying Spanish wines is further mentioned in the report of Consul Ingraham, who states that German alcohol is inferior in quality to Spanish alcohol and has driven all other alcohol from the market throughout Spain, the amount of its importation being \$12,000,000. It injures the reputation of Spanish wines for purity, and affects the general health by their adulteration.

THE DISTILLED LIQUORS OF THE PAARMA-COHCEIA.

Of the twenty samples of brandy and whiskey which were examined, one only, and that a sample of whiskey, was found to conform to the requirement. (Later examinations, made since October 1, have shown considerable improvement with reference to the quality of whiskey examined.)

The following statement, made by au expert, confirms the experience of the analyst of the Board with reference to brandy as sold to the consumer, and the statement unfortunately applies to the pharmacist as well as to dealers in liquors:

The term "brandy" seems to be no longer applied to a spirit produced by the fermentation of grapes, but to a complex mixture, the alcohol of which is derived from graio, potatoes, or, worse of all, the refuse of the beet sugar refineries. It would seem to be fairly impossible at present to purchase a pure cognac, as each individual proprietor of a vineyard has become a distiller and compounder. He has acquired the art of imitating any special flavor or vintage of brandy that may be called for. Potato spirits and beet alcohols the most deleterious and obnoxious of all the varietiea of spirits are sent from Germany into France in vast quanties. These are flavored, colored and branded or labeled to meet the wishes of American connoisseurs. The mere fact of coming out of bend, or "straight through the custom-house," generally accepted here as sufficient evidence that they are pure and genuine. It is rather unfortunate that physicians themactives frequently strengthen this hallucination in favor of imported spirits by giving the most stringent orders to the patients to procure genuine French cognac, even though it may command tenfold the price of an absolutely pure spirit of domestic production. This imperative command becomes a cruel injustice in the case of poor

French brandy in preference to pure domes-

As a general rule the druggists throughout the State, have shown a commendable desire to conform to the requirements of the laws relative to the sale of drugs, and the result has been a gradual but decided improvement in the actual quality of drugs as sold by them throughout the State,

The following list comprises the articles with reference to which notices were issued to retail druggists, informing them of the fact of adulteration:

Articles Adulterated, on Account of Which Notices Were Sent

21.011010 11.111
Olive oil
Oil of juniper
Oil of cubels2
Tincture of n 1x vomica 11
Tineture of opium 4
Compound spirits of ether.6
Spirits of nitrous ether 4
Potass um, iodide 3
Potassum, bitartrate2
Saccharated pensin 3
Red v in

White wine 2	١
Port wine 4	
Brandy	
Allspice	
Iron and quinine,	
citrate	
Sacchorated carbon-	
ate of iron	
Powdered mustrrd	
Powdered jalap . 1	

PROSECUTIONS.

The whole number of prosecutions dur, ing the year ending September 30, 1887were 64, nearly all of which resulted in the conviction of the parties.

There were also seven other cases in which the evidence of guilt was sufficiently clear, but warrants were not obtained, either in consequence of inability to find the offenders or for other reasons of similar nature,

MEXICAN SUGAR.

It is said that Mexico, were its agricul tural resources properly developed, is capable of producing sugar enough to supply the entire world for ages to come. The soil and climate are said to be particularly adapted to the perfect growth and development of the cane. If the duty on sugar should happen to be repealed by Congress as is proposed, a large trade may grow up between this country and Mexico. At the present time, England takes nearly threequarters of the sugar exported from that country. The backwardness of the Mexican sugar production is said to be caused by not only a lack of capital but a want of proper transportation facilities. At present it is carried on mule back across the country which primitive style of traffic is slow, laborious and unprofitable, and on account of the crudeness of the machinery and methods of production the sugar is of very inferior quality. Large aress of land in Mexico are said to be particularly suitable for the cultivation of cane. On table lands where irrigation is possible it may be made to grow very luxuriantly, while down near the sea where there is plenty of moisture it is thought that sugar can be raised cheaper than in any other part of the world. It is said that with proper appliances it can be made at a cost of less than one cent a pound. What the people need is improved machinery and more economical methods of manufacture. At the present time the cane is ground between wooden rollers, turned by horse power, very much after the style of the old New England ender mill, which does not extract half the juice. Mexican sugar is not refined, only brown sugar being used by a large proportion of the natives. Brown lump sugar, a ataple article of consumption there, bringa from 10 to fifteen cents a pound retail. There ought to be a good profit for some enterprising American who has sufficient patients. Under the best of circumstances capital to go into the sugar manufacturing what is there to be gained by the use of business in Mexico. - Grocer's Criterion.

SEMMER PRENING.

Heavy summer-pruning, or lopping off Jeaves and branches after a good growth has been made, -ays the Country Gentleman, always checks more or less the vigor of tha p ant, and if the rubbing off of the supernumerary shoots has been attended to early in the season, very little more will be required than merely pinching back the tips of such shoots as are likely to occupy too much space. There must be a sufficient amount of foliage to feed well the growing fruit. We have seen a vineyard ruined by cutting off shoots and leaves, under the mistaken view of letting in sun-hine on tha grapes. It is the leaves that need the sunlight, and not the fruit. It is better to give too much vine and foliage above the grapes than too little. But there should not be so much as to present a crowded mass of leaves. As a general rule, the hardy, free-growing varieties should be so pruned as to leave the strong bearing shoots about a foot apart, more or less, which wilt give room for the fully developed leaves without crowding. Therefore, as early in the season as the new shoots have made an inch or two of growth, all those likely to prove supernumeraries should be rubbed off, leaving room for the remainones to grow. This is easily and rapidly done, "Lopping all shoots to two leaves," according to your mode, is not giving ampla foliage, and if you cut away much that ia already grown, you do a serious injury. It would be better to permit too dense a growth than to give his check, but best of all is not to allow enough shoots to grow so as to crowd each other. Some vines, however, will possess more natural vigor to withstand this treatment than others. The same principles apply to trimming trees, although 'preserving the equilibrium' is a separate matter, as vigor may be given to a lop-sided tree as well as to an upright one, if properly treated in other respects.

BARRING THE BAR.

The Viticultural Commissioners have hit on a plan by which they can overcome the objection to the proposed Platt's Hall exhibition. Every saloonist in the vicinity of Montgomery and Bush streets protested against the exhibition, on the ground that a bar was to be annexed, and they got au opinion from the Attorney-General, to the effect that the Viticultural Commissioners could not have a bar.

The bar will not be opened. As now proposed, every vinegrower, wine-maker, raisin producer or merchant, will have the right to exhibit his productions and wares in the hall. Viticultural machinery models can also be exhibited. If any one making a display desirea to sell his goods, ha can do so in a roundahout way.

A catalogue embracing every sample is to be made up and corrected at least every month. A wine producer having a stock of wice can have his name, address, the location of his agent in San Francisco and the quantity of wine as well as the price, placed on this catalogue. Any one desiring to purchase wine or raisins can go to the exhibiors and select by sample. will be made by the exhibitors and not by the commission, and a price will he set on the samples so high that the saloonists cannot complain that the exhibition is compet-

ing with them.

This plan meets with the approbation of the dealers and growers. The hall will be vacated by the gambling concern which holds forth at present on October 25th, and soon afterward the exhibits will begin to ar-

EARLY PRINING.

At the opening of the fair in Los Angeles last week, Hon, L. J. Rose in delivering the address as president of the association, referred to the mysterious dying of graps vines at Analiem and other localities as follows:

"As regards the dis ase, which is killing our grape vines in some localities, it is the more annoying, as no satisfactory reason can be given which accounts for it. Dig up a vine which has died, and the bark and wood, both in the roots and top of the vine, are entirely free from imperfections or marks, no insect, no decay, in fact, no occult reason can be given. Professor Morse, of the university, who was sent for to make examination, found nothing, and gave it as his belief that it was caused by violent changes of temperature, a very hot time of weather following a cold foggy time, thus causing an exhausting of the stock of the plant than it was prepared for. There would be some plausibility about this, were it not a fact that we have never had such trouble for over a hundred years. It might be possible to believe that one such accidental year might come where the change from cold to hot were exceptional, and thus have this trouble that one year, but the trouble about this matter is that this condition of the vines dying is repeating itself each coming year, and it has now repeated itself for, say five years, and each succeeding year the damage has increased more each time. It is not, therefore, an accident that has come about for one year, but one that repeats itself every year for the last five years. Now, this would not likely be the case, nor can it be believed that this one year has planted this disease and time completed the harm done, for it is a fact that Anahoim was affeeted first, followed by, perhaps a year later, by Santa Ama, and subsequent to that time it has made its appearance in San Gabriel valley,

" I have studied over this matter much and tried to form some theory why this is, There is one circumstance which may possibly explain this singular phenomenon, namely: Too early pruning. In years previous to the appearance of this disease prinning was never done until the vine had shed all its leaves. At Anaheim I first saw pruning done as soon almost as the grape crop was gathered, and even as early as October. It being convenient, I too followed in the practice and again followed me, and with no immediate evil effect. It is true that vines thus early pruned were were the last to buil out the following spring, but as there was no enfectbled condition of growth, when the vines did start it was a condition of affairs to be desired. for it made less risk to the crop of grapes by being overtaken by a late frost. Yet that there was an effect was charly shown by the lateness of the vine putting forth their new growth. Again, Anaheim was the first to practice carly pruning, and was the first to suffer from the vines dying. Santa Ana would naturally, being adjouning, be the next to follow the practice and was next affected. Sunny Slope, my former home, was the first to suffer in the San Gabriel vall y, and was the first to practice the early pruning. All these facts may be only coincidents, and may not be the cause for accounting for this discase, yet when no satisfactory reason has ever been given, it may be well to postpone

and until all the leaves have naturally been and November, nearly all the leaves are yet held fast and many of the ends of shoots are yet making a feeble growth. It is, of ping the leaves of the most robust growth of any tree or plant if often enough repeated will kill such tree or plant. It is true, in October and November leaves of the vine have naturally performed their duty, and the wood is hard, yet it may be after all, this early pruning followed for a few years, in the end tells on the life and health of a vine, and has the same effect, only more slowly and less apparent than the stripping the new leaves has an immediate offict on all plant life.

THE VINE AND HIS PREIF.

(Continued from Page 115)

Continuing the subject in the Vineyardist, Dr. J. H. McCarty says: In the old sculptures showing the process of treading out the grape juices, a group of men are seen substantially maked holding to short ropes, fastened to a beam over them to enable them to preserve their equilibrium, and work with greater case. The treading was accompanied with singing or "shouting," that is, some sort of monotonous refram, like that one hears on ship-board when a gang of sailors are hoisting the canvas. These vats were sometimes bewin out of the solid rock. The prophet Isiah wrote in the fifth chapter, second verse, of the wine press "He made a wine press therein." Literrally he hewed a wine press. So Jesus says in Matt. 21:23. " He digged a wine press in it?" that is, howed it out of the rock. It must have been that these aucient "tread rs" of the grapes had cleaner feet than the average vinyardist of the present time, or that the wine drinkers were a good deal less fastidious than nowwhich?

Chamber's Cyclopiedia is authority for the statement that in some of the winemaking countries of Europe it has been a custom to have to have "a naked man go into the wine tub, who accomplished the necessary stirring and promoted fermentation by his animal heat. Several persons have been killed in this way by suffocation from the atmosphere of carbonic acid gas."

The gleukos or omstern, or in our language "must" which ran from the grape into the vat by natural pressure was usually, even among the Greeks and Romans preserved separately, and great care was taken to prevent its fermentation. The mode by which this was accomplished was to put it in a close vessel and sink it to the bottom of a pond for the space of a month.

The juice obtained from pressing was often boiled down instead of being allowed to ferment. It was so common a process in all ancient wine-making regions that places were filled up for the purpose and were called defrutaria (singular defratarium) The write thus inspissated "boiled down," reduced to one-half of its original quantity, was termed defruction. Frequent mention is made in the bible, as well as in classical writing of a kind of boiled wine or syrup, the thickness of which rendered it is cessary to mingle water with it either hot or cold before drinking, Solomon

pruning as was practiced in former years hath also furnished her table. Com, cat and far better than I could do it at great of my bread and drink of the wine, which expense mys if with steam and sub-soil shot by maturity. To prune in October I have mingled " Everywhere he count plows cils against wine drinking. So this was sweet wine, the unformented pure of the fruit of the vine, which was not only to dieg roots at the ends gradually rose a course, a well known fact, that the strip- harmless, but mourishing, and good to little as they approached the centers of the which he refers. There was also "mayed. wine," made so strong an instructing by the addition of drugs, such as mytch mandrapor and opiate, that nobody but an unwise person could be induced to drink it.

"Who hath woe? Who hath sorrow? Who hath contention? Who hath bubbling? Who hath wounds without cause? Who hath reduces of eyes?

"They that tarry long at the wine; they that go to sdek mixed wine,"

Some mixed wines are harmless as that of the inspissated juices of the grape and water, or milk as Solomon commends, but others are harmful- harm begins with the love of "strong damk," and at last they who include to great excess, are described as "mighty to mingle strong drink." Blessings come to the man who eats the grape, who drinks its pure and wholesome juics, but a curse is on him who becomes a victim to the cup which contains "strong druck,"

"Woe unto them that are mighty to drank wine, and men of strength to mingle strong

PREPARING SOIL FOR GRAPE VINUS.

Judging from my own experence, says D. S. Marvin in Popular Gardening, 1 think that the roots of the vine need to penetrate the sub-soil. I am aware that of late it has been recommended and practiced to set out vineyards on a cheap scale without trenching or sub-soiling.

This, in my judgment, is the chief reason why the vines suffer so much from sporadic diseases. The roots being too near the surface are subjected to all the changes and vicissitudes of climatic conditions, while if set deeper they would reecive the protection of a deeper soil against sudden changes.

An experiment that I made a few years ago saves so much of the heavy expense of sub-soiling, and has proved so satisfactory, that I can safely recommend it to vineyard planters. It is so simple and applicable to all varying conditions, that no one need hisitate about adopting it. I simply plowed and chancel out treuches in the fall as steep as their sides could be made, eight feet apart and twenty inches deep, set the vines in the trenches in the following spring, and filled them in again mainly with the plow.

The reason for success in this experiment of fall trenching is found in the action of frost during the winter being enabled to penetrate the sub-soil do per thus it could otherwise do through the means of these open trenches, thereby fining and comminuting the soil and subsoil and bringing up to the surface some of the lost fertility of past ages. I found to my great surprise that before the frest had gone our of the ground the trenches were decreated h ridg s w re high r in the spring than n the fall, showing that the frest hall penetrated from the tranch sisted ways not other word of the ride's, heaving and loosening it much deep r and fining it as I had never before observed, under any other condiwrote of the practice where he commends tions - I found that I had been utilizing this early pruning and go back to the late wisdom-"She hath mingled her wine; she the forces of nature to do my work free

Sibsogn ntly it was shown that as the rests of the view spread out and grow the rows, and that occasionally the plow in the subsequent tilllage of the vines cut off the ands of a few of thes, feeding roots, but I could not perceive that this was a serious inpury, for new and more branching roots were sent out from the severed ones the next season, and I imagined that it had reinvigorated the vines, and caused them to grow more luxurantly, but could not express a positive opinion as to this, without more experience and observation.

Another point gamed was, that in the spring I did not have to dig holes to set the vines at a busy season of the year. The holes were already dug just the right depth. The fine top soil had fallen in from the siles of the ditches, making the very best possible conditions after strewing a little phosphate, ashes and bone dust in the treuch, for the fine subsequent, healthy and vigorous growth obtained, and I found that I could work the soil some two weeks earlier than that not trenched. I actually set the vines while there were yet frost in the ridges, the soil working dry and mellow.

RAISINS IN RIO GRANDE VALLEY.

By experience of successful growers, it is demonstrated that wine graps of the mission variety, which is as yet that principally grown in the Rio Grands valley, lose in drying about 31, to 1 that is it will take $3^{\,\mathrm{h}}_{\,\mathrm{e}}$ pounds of the fully ripe grapes to make one pound of raisins. A ton of grapes therefore, will make about 615 pounds of dri d grap s. These should not cost more than 1; cent per pound to dry in the sunsay \$3.07 on 615 pounds, and the product if core is taken in gathering and drying, should be worth here at home, from 5 to 8 cents per pound or at the average of those sums, 61, cents, a total of \$39,97. Is not this much botter than selling the fresh fruit to wine makers and middle men at 1 and 11, cents per pount, as was the case last year with many growers. No deduction is made in these calculations for picking, as would have to be done in either event; and deducting the cost of diping, the net result would be, say \$36,90 for the ton of fresh fruit reduced to dried. Properly dried the grapes will keep undefinitely,

The Fruit Grower, in an excellent article in this subject, says that in case of drying let the griques get fully ripe, when all the saccharms will be developed, experienced hands laying them upon the ground, when ent from the vine. Upon the ground they will dry until the miny season without turning, but the safer plan is to dry on trays, which permits stacking in case of rain, and rain is almost a cortainty before the whole crep is fit to pack, or can be lifed. If dired on trays, the misms should be turned as soon as the upper side is dried, Place an empty tray over a full one and reverse them, this turns under disid up to the sun. When fully dired on both sides, they should be taken to in the field whilst stems are dry and brittle, and rangthrough estemming machine and then through a functing naill to blow out the stems. When bear depuck into new white, a tron sacks, A few charge banches are want dain boxes is cheap raisins, but usuably they will not pay for the extrace of whilst there is a sure and quick market to the stemmed grapes



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FRIDAY......AUGUST 31, 1888

THE Viticultural Exchange is now an as sured certainty. All hitches have been smoothed over, and with the exception of bar privileges the Commissioners have carried every point. The whiskey men in the vicinity saw diminished profits ahead when the pure wine began to flow, and raised auch a storm of opposition that it was deemed prudent to drop the subject altogether, rather than have any delay in the plan of cresting a renewal of interest in the industry. The Viticultural Commismust be congratulated on the new departure. It will benefit the wine-growers, by bringing his products more directly before the public, while at the same time giving the latter an opportunity to become acquainted with the wine-making resources of the State, in regard to which nine-tenths of our people are to-day in painful ignorance. A permanent display of fruit wines and machinery will be an attraction to many visitors, and a standing advertisement for the State. It is also proposed to arrange for regular meetings of vine-growers, and for discussions on popular or viticultural subjects. Everything, it is hoped, will be in running order about the middle of October.

WE ARE in receipt of an invitation and ticket for the Indiana State Fair, which will open in Indianapolis on September 17th. The omission to enclose the customary railroad pass for self and lady friends at the same time, interferes with the ac ceptance of the courtesy extended by the State Board of Agriculture, owing to the atrained relations which exist at present between this office and the local railroad interpretate of the inter-state law, on the aubject of free passes. Recognizing the extreme liberality of the Indiana officials in comparison with our own Fair people, who require three months coaxing before they will give up a pasteboard on any pretense, we feel almost bound to attempt the trip on a bluff game with the showy ticket, which might pass all right with a shortsighted conductor. Not to be outdone in generosity, and in a spirit of reciprocity, we herewith extend an invitation to the Board for a dinner to be given in their honor on the 17th prox. Better take unlimited tickets.

The project of curtailing the output of wine is growing in favor smong the grape-growers of the State. That one portion of an industry should prosper at the expense of another is not a satisfactory condition of affairs by any means, and those who suffer by it are now beginning to realize the situation into which they have been drifting for years. The grape-grower is now forced to act in self-protection, and either provide a remedy or get out of the business altogether.

The cry of over production must be received with some hesitation, when it is recollected that a recent estimation from a reliable source, places the annual consump. tion at 32,618,290 gallons. According to Chas. A. Witman of the State Board of Viticulure, the present output of California wine would only supply the United States at the rate of one-third of a gallon per capita annually, while France is credited with the consumption of thirty gallons. If our demand were increased to only one-half the latter estimate, the requirements for home purposes alone, would exceed 900,000,000 gallons a year. It is only fair to assume that the average of consumption will imcrease yearly in addition to a growing foreign demand.

With such a prospect ahead, it would be a serious mistake to get discouraged at this early date. As our wines become more widely known throughout the Eastern States, they will supplant to a great extent the distilled spirits and mult liquors which are now consumed annually at the rate of 71,064,733 and 717,748,854 gallons respectively.

The price of grapes and wine has been forced far below a point which will guarantee a living to those in the business, and the plan now generally adopted, of drying at least one-half of the present crop, will materially assist in giving a more healthy tone to the market in the future.

The Viticultural prospects are good in New York State and many crops of grapes are heralded as approaching matnrity in the Chautauqua section, and also in the Hudson River Valley-one third or more increase being estimated over that of last year. And this is true, or nearly so, of the Western New York grape region of which Penn Van is the center. If the fruit now on the vines, along the slopes of Lakes Seneca, Keuka, Canandaigua, and in Pleasant Valley, Vine Valley and Naples Valley, come to maturity without harm, and fully ripen, it will be one of the most successful grape and wine seasons, say nothing of prices, that this fruitful vineyard region has ever witnessed since the industry was started over 30 years ago.

MESSES, ISAAC DE TURE, Charles Krug John H. Wheeler, H. W. Crabb and J. De-Barth Shorb, constituting a special committee appointed at the last meeting of the Grape Growers' and Winemakers' Association have formulated a circular to vineyardists to apread broadcast over the state advising the drying of all Mission and Malvoisie grapes grown this year. The dried grapes are to be sold in the East, leaving the better variety for wine-making. By this means it is hoped to make a better price for all medium and good wines. The committee have also taken steps toward erection of a distillery where all inferior wice on hand can be made up into brandy.

The vinegrowers, as a rule, are favorable to these measures, and the committee anticipate early co-operation.

SEVERAL CARLOADS of dried wine grapes were sent East last year and sold for three ond four cents a pound. An eastern dealer who took many of these grapes is now in the city. He appropries that he will take all the dried grapes he can get for three cents a pound. It takes a little over three tons of fresh grapes to make one ton of the dried product. Dispatches sent from Sacramento to eastern dealers a few days ago brought responses that show a fair demand. Sgobel & Day of New York wired that dried grapes for distilling would bring two cents a pound. Blake & Ripley of Boston said they had a limited sale at four and five cents. From Chicago the Porter Brothers Company have sent word to Henry Weinstock that the direct product would sell readily for five cents a pound.

Tons and tous of grapes, is the descripgiven by Farm Vineyard of the crop at Chantauqua, in New York State. The outlook for the grape crop along the lake shore continues good and the growers feel jubilant. The gross tonage will exceed that of any previous year, and the fruit promises to be exceptional fine in quality. The "berries" are large in size and the vines all summer long have shown much vitality. The majority of the crop will be sold through the commission houses for table use, but the growers realize that the acreage is steadily increased, new markets will have to be secured or else wine making will be extensively engaged. In years to come Northern Chantaugus may reasonably be expected to out-rival the wine-producing localities of California. Even unfermented wine is gaining in popular taste, and large quantities will be manufactured this fall for home use

Exporters of wines at Barcelona have signed a petition in which the Government is urged to create bonded warehouses in which wines for export may be given the necessary additional alcoholic strength without such alcohol being subject to the new tax. The latter is highly unpopular because injudicious, and protests are cropping up in all directions; at Tarragoua the syndicate of dealers in alcohol have joined this movement hostile to new tax.

A BILL in Equity has been brought in the United States Circuit Court by A. S. Paré, against Bernard Toulouse and John Deloricux, for infringement on the wine and fruit press "Le Merveilleux." Complainant asks for a writ of preliminary injunction, as well as heavy damages. W. S. Bates, one of the ablest patent lawyers and experts of Chicago, has been retained as counsel in the case, and Messrs, Scrivner & Boone, attorneys-at-law, of this city, represent plaintiff here.

The Entonological department of the agricultural Commission of Massachusetts, notes that the eau celeste (blue-water, a simple solution of solphnte of copper, with ammonia) recently recommended by this department as a remedy for mildew, at the same time rids plants of the Rose Beetle when they are so infested. Col. A. W. Pearson, of New Jersey states that it not only saved his vines from injury by mildew but also rid them entirely of millions of these beetles, which were threatening to destroy the fruit and follage entirely.

The Chicago market for California fruits is firm. The following are the latest quotations of grape sales: Muscata, \$2 30 to \$2 60c; Tokay, \$2 65.

INDIANA STATE FAIR.

The year 1888, although a campaign season, with so many and varied counter attraciions, does not diminish the interest which exhibitors take in the now worldfamed Indiana State Fair. At the present time the applications for space are far in advance of the usual number and flowing in at a rate never before equalled in the history of the exhibition. Exhibitors are advised through the newspapers of the extensive improvements going forward on the grounds in the nature of a new race-course, which necessitated the purchase of twenty acres additional grounds that has been added to the already large area, making the Indiana State Fair Grounds one of the very best and most convenient in all its appointment of any of a similar character in the United States or Canada.

In addition an immense two-story amphitheater is approaching completion, ready for the opening September 17th. The new track is reported by horsemen, who have viewed and tested it as one of the choicest in tha conutry, and magnificent speed contests may be looked for this season, such as have never before been witnessed on the Indiana State Fair Grounds since its inception.

The twenty acres additional has been improved and the general appearance of the grounds so changed that it will scarcely be recognized as the same place. Considerable grading and tile draining has been done and water pipes laid through the groundate insure the comfort and convenience of exhibitors and visitors.

The steady growth of the State Fair proves its importance as an educator in those matters which so interest and are indispensable to successful tarming.

WHOLESALE MARKET.

Quotations given are for large lots to the whole

CALIFORNIA RAISINS.

Haives, Qu	iarters and E	ighths. 25, a	50 and 75 cents
higher respe	ctively than	whole box p	rices.
London Laye	ers, choice pe	r box	-\$1 65@ 1 75
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Layers, per t	юх.,		1 50 at 1 65
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" Sultanas,	unbleached,	in boxes, 🕏 🛭	b. 6d
**	bloowhod	14 41	100

CANNED GRAPES.

Grapes, Muscat, $2\frac{1}{2}$ lbs. \$ 1 40@ 1 50. Galls. 4 50 ... 3 lb. tins 2 25@ 2 50

The yearly manufacture of flour in the United States is about 75,000,000 barrels, of which 62,000,000 barrels are required for domestic consumption, and 10,000,000 to 13,000,000 barrels for export.

AS OTHERS SEE US.

EDITOR MERCHANT:

Chicago, August 15, 1888.

" " As to the value of your paper I desire to say one appreciates its importance more at a distance, as useful it may seem inside the State of California. A true representative of the great industries in wine and fruit of the Golden State.

Respectfully yours,

G. Zoll.

Reports from different sections of Napa valley are to the effect that the grape crop has been seriously blighted by the late hot spell. Some estimate the loss at one-fourth, Some of the earlier varieties will require picking

GRAPE GROP OF 1888.

Additional Reports Received by Clarence J. Welmore, Secretary of the State Viticultural Commission.

SAN DIEGO COUNTY.

Report of N. A. Eaton, Elemitas.

No damage from frost. Very little damage from coulure. Twenty per cent, loss from mildew on mesa land near Pacific Ocean beach. In the interior the crops are good and they would have been here if the grape-growers had applied the remedies recommended by your Commission. Mission grapes a full crop. Muscats light, owing to mildew and ravages of birds, ralbits, etc. This year's crop will be about the same as that of 1887.

During our last year boom there was a rush of new settlers, and they are new andly in need of Viticultural and Horticultural books in order that they may know how to successfully raise vines and fruit trees. I distributed several years ago a large number of pamphb ts, 'bublished by your Commission, to the farmers in my district, and the result has been that more of them have been successful than they would have been without them, and thougands of acres of vines have been added to the wealth of the State. The benefit derived from the books distribut dean only be estimated by thousands of didlars. Will always be pleased to distribute any reports you may send me,

Report of G. F. MERRIAM, Escoudido. No damage from frost. From ten to thirty-five per cent, lost from coulure. Damage to cut worms in many vincyardamounts to two-thirds of the crop. From the vine hopper, which is beginning to be a general pest, the loss is not yet known, Clean culture in the winter, we think to be a certain remedy for cut worms.

None of our ranches will produce a full crop. This year's crop will be twenty-five per cent, less than that of 1887. The County will produce 25,000 gallons of wine.

SONOMA COUNTY.

Report of C. G. James, For stville.

No damage from frost, No damage to Zinfandels from conlure, but twenty per cent, damage to Ucher, Szagos and Burger, As nine-tenths of our vineyards are planted to Zinfandels the loss is very little. Zinfandel, Chasselas and Mataro a full crop. Burger, Feber Szagos, Tokay and Muscat a light crop. This year's crop will be fifty per cent. greater than that of 1887.

Report of James McDonnell, Jr., Sonoma.

No damage from frost or coulure. Damage from phylloxern about the same as last year. Zinfundel, Reisting. Tokay and Chasselas a full crop. This year's cropwill be larger than that of 1887. I estimate teat the County will produce 2,50 (noo gallons of wine and 350 tons of table grapes.

Report of R. Sharboro Asti.

No damage from frest. A loss of 10 tons from coulure, 50 tons from sun burn and 5 tons from army worms.

Burger, Grenache, Malvoisie, Zinfandel, Rieshning and black Pinot a fall crop. Charbono and Museat a light crop,

We will have 650 tens more than in 1887 and will produce 250,000 gallons of winand 50 tons of table grapes.

SANTA CLARA COUNTY.

Report of J. B. J. PORTAL, San Jose.

dimage by confure to Charbono Zinfindel, its fifty per cent. Mature, Carignan, Cabernet Franc, and all white vari ties, a full crop. Charbono, frost and sun burn. Trost killed some Merlot and Cabernet Sauviguon a light crop. This year's crop will be about the same as that of 1887, and I estimate it to be about 2, 600,000 gallons. The vintage will be a little earlier than last's ason. The quality perhaps, better, according to weather. Wine-making facilities are being of raisins, doubled to expacity of last year. There is a strong disposition on the part of growers to hold, their grapes at \$20 per ton, or dispose of them by drying, etc. There is a sign that their offorts will be partially sucessful on account of the large mereased facilities for wine-making and apparent prospects of short crop of well selected erop. This year's crop will be much bett r grapes.

R port of JONATHAN HAGEE, Gilrov

No damage from frost. Ten per cent damage trom conture. Zufambel. Char-bono, Mounter, Charch. Nor. Pinot, Mission and Groma he a full crop. This year's than that of 1887.

We are greatly in need of a winery, and before another season passes over our loads we explict to incorporate a coloporative winery on a small scale. Grape growing is long past the experimental stage Some originals can be seen thirty-fivyears old, still yielding amazing returns without having to use fertilizers. Our remeaning study and want of knowledge is what variety of plant,

CALAVARAS COUNTY

Report of J. H. Southwork, Milton,

No damage from frost or coulure. Slight damage from mildew and sunburn. Mission will produce a full crop. This year's eron will be larger than that of 1887. Old vin yards all plinted to Mission grape. Now vincy ands to Muscut.

ALAMEDA COUNTY

Report of J. H. TAYLOR, Livermore.

No damage from frist. Ten per cent loss from confure or Muscat and Gren-

No variety will produce a full crop, owing to the light ramfall during the year and failure to properly cultivate, the vineyards during the summer months, and in some instances vers injudicious summer-pruning,

To not think this year's crop will exceed that of 1887.

Report of C. C. McIver, Mission San Juse

No damage from frost. Five per cent oss from confure.

Zinfandel, Mission, Charbono, Cabernet Franc, M. rlot, Verdot, Sennllon, Sauvignon Blanc, Palomino, Orleans Riesling and Franken Riesing a full crop. Milbeck, Cabernet Sauvignon, Johannisberg Riesling a light crop. This year's crop will be thirty-three per cent larger than that of 1887. Estimate that the Mission San Jose district wid produce about 1,000,000 galof wine and 500 tons or table grapes.

FLACER COUNTY

Report of L. C. GAGE, Lincoln.

No damage from frest. Twenty per cent loss from confure. Twenty-five per cent loss from sun burn

Rose Peru, Mission, Chasselas, Malvoisie and Feber Szagos a full crop. Muscat, Zinfandel, Tokay, a light crop. This year's crop about the same as that of 1887.

EL DORADO COUNTY.

Report of WM A. KBAMP, Diamond

No damage from frost, Fifty per centy. Loss from frost estimated at from twenty

All varieties have a light crop owing to vines on the 20th of May, and Flame Tokay were sun burned July 5th. This year's crop will be one third less than that of 1887. Estimate that the county will pro-

Report of M. J. Arthurs, Coloms.

No damage from frost or confure,

Catawles, Tokay, Malvoisie, Green, Hongarian, Mission, Burgardy and White Na poleon a full crop.

Zinfand I, Isabella and Muscat a light than that of 1887, but will not be as heavy as it ought to be. The wine crop will be 60 tous of table grap s will be produced

Taking into consider atrougher great dame age done to the majority of our vincy ards crop will be tw mty per e nt greater than Last year by frost our grape crop will be short. Those vinevards that escaped the frost last year will have a good crop. Unless the hot wenther melerates the sun will burning them up.

CONTRA COSTA COUNTY.

Report of S. FABJEON, Concord,

No damage from frost. Slight damage from conjure.

All varieties except Tokay will produce a full crop. This years's crop will be thirtythree and one third per cent greater than that of 1887. Estimate the production of by pouring through them boiling water, the county at 1,500,000 g dlons of wine, 2.50) tons of table grapes, and 7,500 box s of raisins.

Whit grapes will be ripe one to two weeks arther than in former years.

have had some excessively hot days, the thermomelor ranging from 104° to 112° in water 15 or 20 minutes and then hang in the shade. This extreme heat has dried the without ringing. up a great many grapes and burned the leaves off the vines. The loss to the crop and boiling water is the bet thing to use, as from this cause during the past week is lestimated from 2,000,000 to 3,000,000 gallons, fabric, As other applications take out the and the total amount of wine made will not color of the fabric, it is best to attend to all now exceed that of 1887, and the prospects such stains while they are fresh are that it will be less

If cool, foggy weather follows some of the loss will be recovered, but if the hot weather continues the loss will be greater than now estimated,

CLARENCE J. WETMORE,

8 cretary Viticultural Commission.

The secretary of the State Viticultural Commission is kept busy sending out the Report of the Sixth Annual Viticultural Convention. Applications for the R port. are being received from all portions of the State. Parties not having received a copy can do so by calling at the office of the Commission, 204 Montgomery Street, or by sending 5 cents in postage stamps to the S cretary of the Commission,

Mrs 8 M Nordman lately lectured in this city on "Viticulture" and is reported to have said that it was a common thing to so children seven years old drunk in the Senoma Valley. Mr. R A Poppe of Sonoma, in writing to the Secretary of the Commission denies the truth of her statenout and says that is also lub ly falso

Subscribe for the Marchant.

INTERMENTED WINES.

A writer in the Pacific Rural Press gives this method of making a wholesome and delicious and rim ated wine with very little trouble, as follows

"In the first place, I stem the grapes and press out the price in a tank, letting it duce about 14 000 gailons wine, 30 tons stand over night to settle. In the morntable grap s and from 1,200 to 1,500 to xes, ting I rack it off and then filter, thus rendering it free from vice table matter. I also take a quantity of black grapes and put them in a boiler, letting them come to a boil, in prder to produce a dark juice. This juice I also filter. Now, by blending this junces, any shade of wine I desire is produced, from a light pink to a do p claret color. I then put the wine (so much of one color as is desired; in a boilr, which should be of copper, with a fancet at the bottom, for convenience in bottilty per cent less than that of 1886. About thing, and let it come to a brise boil, skimusing what rises to the surface. It is now ready to draw off into bottles, which should be standing in hot water to prevent breaking, on the introduction of the hot juice. When the bottles are filled, they should be corked immediately, and then the corked immediately, and the corked ends dipped distroy a great many of our grapes by into melted resin, which seals them airtight. I think that wine made in this way, and brought into notice, would soon become the most popular beverage used, taking the place at dinner that coffee does at the break ast table."

Fruit Stains

These can be removed from white goods provided that the spots have not first been wet in cold water. If the stains are of long standing, and do not yield to this treatment, dip them in water to which has been added chloride of lime in the propor-Since making out my estimate of the tion of one table spoonful of the chloride wine production for the coming season, we to one one quart of water. If the stains are very deep, let the article remain in the

> Status on colored goods are more serious, it will not injure the most delicate color or

Sugar Quotations.

California Sugar Refinery price list dated August 20th Circle A Pat Cube, 71,c; Circle A Crushed, 714c; Fine Crushed, 714c; Extra Powlered, 71 sc; Dry Granulated, 71,e; Confectioners' Circle A, 7c; Extra C, 61, et Golden C, 51, et Star Drips Syrup, in bbls, 30c; hf do, 121 e; 5-gall kegs, 39% of 1 gail tims, 47% to per gallon,

Price list of the American Sugar R-fluery daled August 20th: Extra Fine Cube, in bbls, 70 c; Circle A, Crushed, 714c; Fine Crushed, $7^{\pm}_{s} = \text{Powered}, 7^{\pm}_{s} c$; Extra Fine Powdered, $7^{\pm}_{s} c$; Dry Granulat d, $7^{\pm}_{s} c$; XX Dry Granulated, 71, c. Confectioners' Circle A. 7c. Extra C. 6c; Golden C, 53,c; American Golden Syrup, in bbls, 30c per

In Fresno and Los Augeles Counties a great many vinevardists are drying their wines, preferring to do so to selling their grapes to the wineries at \$10 per ton, Dried Feher Szagos grapes in Fresno are selling at 31, cents per pound, and other varieties of dried wine grapes at 21, to 3

TEMPERANCE DRINKS.

The following report of the Analyst for the Massachusetts Board of Health, throws some light on the intensely mild appredients of the tonics so largely patroniz d by the prohibitionist who would hang, draw and quarter, had he the power, the makers and growers of pure win-s. It is interesting to note the alcoholic strength of the compounded drugs, which are so heavily absorbed by these fanatics, and consider the cogents ressons furnished for the dyspectic and long suffering appearance of the itiueraut apostles of caut.

TONICS.

Dr. Buckland's Scotch Oats Essence. New York City. "Enough alcohol is added to dissolve resins, and prevent fermenta tion." "Not a temporary and fleeting stimulant, but a permanent tonic. Its use must be regular and continued over a considerable period. An extract of double and triple strength also made. Dose, 10 to 15 drops, to a teaspoonful three or four times daily, increased as needed." In the simple essence 35 per cent, of alcohol was found on assay. Further examination of this article reveals a still more dangerous ingredient in its composition. The sample analyzed, was found to contain one-fourth grain of morphia to the ounce of the socalled "Essence of Oats," A more insidious and dangerous fraud can scarcely be imagined, especially when administered, as this is recommended, for the cure of inebriety or the opium habit.

The "Best" Tonic, Milwankee, Wisconain. "A concentrated liquid extract of malt and hops. Neither alcohol nor spirits used in its preparation. Dose, from a wineglassful to a pint bottle tull per day." Percentage of alcohol found, 7,65,

Carter's Physical Extract, Georgetown Mass. Dose, I table spoonful three times daily. 22 per cent, of alcohol found on

Hooker's Wigwam Tonic, Haverhill' Mass. One tablespoonful three times daily 20.7 per cent, of alcohol found on assay.

Hoofland's German Tonic, Philadelphia. Admits Santa Cruz rum. Wineglass, four times daily. 29.3 per cent.

Hop Tonic, Grand Rapids, Mich. One tablespoonful to wineglass three times a day. 7 per cent.

a rum drink." Tablespoonful to wineglass, four times daily. 13, 2 per cent.

Jackson's Golden Seal Tonic, Boston. Admits Marsala wine. Half wineglass three times daily. 19,6 per cent.

Liebig Co's Cocoa Beef Tonie, New York. "With sherry." Two to four teaspoonfuls three times daily. 13.2 per cent.

Mensman's Peptonized Beef Tonic, New York. "Contains spirit." One tablespoonful to three, three times daily. 16.5 per cent.

Parker's Tonic, New York. "A purely vegetable extract." Stimulus to the hody without intoxicating." "Incluiates struggling to reform will find its tonic and sustaining influence on the nervous system a great help to their efforts." Dose as tonic. one to two tenspoonfuls, one to three times daily, 41.6 per cent.

Schenck's Sea-Weed Tonic, Philadelphia. "Distilled from sea-weed after the same manner as Jamaica spirits is from sugarcane. It is therefore entirely harmless and free from the injurious properties of corn and rye whiskey." Dose, half wineglass three times daily. 10,5 per cent.

Atwood's Oninine Tonic Bitters, Boston-Dose, half tablespoonful to half wineglass, mixed with water, wine or spirit three times daily, 20,2 per cent,

L. F. Atwood's Jaundice Bitters, Portland, Me. Half tablespoon to half wineglass one to six times daily. 23,3 per cent.

Moses Atwood's Jaundice Bitters, New York. Half tablespoon to wineglass one to six times daily, 17.1 per cent,

H. Bexter's Mandrake Bitter, Burlington, Vt. Oue to two tablespoonfuls. 16,5 per cent

Boker's Stomach Bitters, New York, Dose not given, 42.5 per cent,

Brown's Iron Bitters, Baltimore, Md. "Perfectly harmless." "Not a substitute Tablespoonful. 19,7 per for whiskey,"

Burdock Blood Bitters, Buffalo, N. Y. Teaspoonful to tablespoonful three times daily. 25,2 per cent.

Carter's Scotch Bitters, Georgetown, Mass. Tablespoon to wineglassful, as occasion requires. 17.6 per cent.

Colton's Bitters, Westfield, Mass. Teaspoon to two tablespoonfuls three times daily. 26.1 per cent.

Copp's White Mountain Bitters, Manchester, N. II. "Not an alcoholic beverage." Wineglassful, 6 per cent,

Drake's Plantation Bitters, New York. "Contains St. Croix rum." Wineglassful three times daily. 33.2 per cent.

Flint's Quaker's Bitters, Boston, Teaspoonful six times daily. 21.4 per cent.

Goodhue's Bitters, Salem, Mass. Half wineglassful, 16,1 per cent.

Hartshorn's Bitters, Boston. Tablespoon to half wineglassful, 22.2 per cent. Hoofland's German Bitters, Philadelphia. "Entirely vegetable and free from alcoholic stimulant," Tablespoonful four times daily. 25,6 per cent.

Hop Bitters, Rochester, N. W. One to three tablespoonfuls three times daily. 12 ner cent.

Hostetter's Stomach Bitters, Pittsburg, Pa. Wineglassful three times daily, 44,3

Kaufmann's Sulphur Bitters, Boston. 'Contains no alcohol.' Tea to tablespc onful. It contains no sulphur, but has 20.5 per cent, of alcohol.

Kingsley's Iron Tonic, Northampton, Howe's Arabian Tonic, New York. "Not Mass. One to two teaspoonfuls three times daily. 14.9 per cent.

Langley's Bitters, Boston. Half wineglassful or more three times daily. 18.1 per cent.

Liverbool's Mexican Touic Bitters, Boston. Half to full wineglassful three times daily, 22.4 per cent,

Oxygenated Bitters, New York, Tea to tablespoonful, Acid but no alcohol.

Pierce's Indian Restoration Bitters, Boston. Up to wineglassful and to six times daily. 6.1 per cent.

Z. Porter's Stomach Bitters, New York. Tablespoonful or more several times daily. 27.9 per cent.

Rush's Bitters, New York. Wineglassful four times daily. 35 per cent.

Dr. Richardson's Concentrated Sherry Wine Bitters, Wakefield, Mass. Tablespoonful to half wineglass or more three times daily, "or when there is a sensation of weakness or uneasiness at the stomach." 47.5 per cent.

Secor's Cinchona Bitters, Providence, R. I. Half wineglassful three times daily. 13.1 per cent.

H. Table to wineglassful, 21,5 per cent. Job Sweet's Strengtheoing Bitters, N. w. Bedford. Tablespoonful to wineglassful tion it passes from the leaves to the fruit. three times daily. 29 per cent.

Thurston's Old Continental Bitters, Lynn, Mass. Tea to two tablespoonfuls. 11.4 per cent.

Walker's Vinegar Bitters, New York "Free from all alcoholic stimulants. Contains no spirit." Half to full wineglass. C.I per cent.

Warner's Safe Tonic Bitters, Rochester N. Y. Table to wineglassful. 35.7 per

Warren's Bilions Bitters, Boston. Teaspoon to two tablespooufuls one to three times daily. 21.5 per cent.

Wheeler's Tonic Sherry Wine Bitters, Boston, Two-thirds wineglass two times daily. 18.8 per cent.

Wheat Bitters, New York, win-glass three times daily. 13.6 per

Faith Whitcomb's Nerve Bitters, Boston. Tablespoonful three times daily. 20,3 per

Dr. William's Vegetable Jaundice Bitters. Lowell, Mass. Half to full wineglassful one time daily. 18.5 cent.

FOREIGN WINE NOTES.

A French correspondent writing in the Rural Press gives some interesting notes in European vine, and other matters pertaining to the grape industry. He says:

Near Brussels, in Belgium, in a village called Holland, there is a vast establishment for the cultivation of the vines in hot-houses From afar, the hill on which it stands looks like a mountain of glass. There are about 600 hot-houses devoted to that industry, each one measuring 20 feet in width and from 80 to 100 in length. They are all built alike and are a wonder of practical sense and ingenious economy.

The sight is a beautiful one from a distance, but far more beautiful and interest ing when inside. Here you see vines in all stages of growth and development. Here are some just budding out; there some in bloom; farther on, great bunches hanging down, nearly ripe. In another hot-house the crop has been gathered and sold, and the vine is now worked upon to make it produce another crop. In this vast establishment you can find ripe grapes all the year round, winter and summer. All these hot-houses are heated by a system of earth enware pipes, which are very cheap. Thousands of loads of coal are used every year to produce heat, but also hundreds of hoxes of fine grapes leave here every week, worth more or less money, according to the season of the year. In winter and spring, from \$1 to \$2 a pound are often paid for grapes and they are in constant demand all over Europe at that price. It is certainly a prosperous and money-making business, for it is increasing every year.

TO DETECT ARTIFICIAL COLORING IN WINES.

Take wine, seven onnces; peroxide of manganese, one ounce. Finely pulverize the manganese and mix it with the wine. Shake well together, and when the mixture is complete, after about 15 to 20 minutes, filter with great care. If the wine is perfectly pure of any artificial coloring, it will come out of the filter perfectly colorless; if, to the contrary, it shows any color, it is artificial.

SUGAR IN GRAPES.

Vegetable physiology has established as a Shonyo's German Bitters, Concord, N. positive fact that the sugar, which exists in maketh glad the heart of man."

abundance in the ripe grapes, is formed in the leaves of the vine, and that by assimila-

The consequence of this fact is that the quantity of sugar found in the ripe grapes will depend on the quality of the foliage of the vines. Experiments have been made for years on that subject and all tend to prove the truth of the above statement. Vines treated by sulphate of copper, and thus guaranteed against the ravages of the mildew, keep their foliage green longer than: the diseased vines and furnish always wines a great deal richer in alcohol.

This fact has been proven by experiments: made, during several consecutive years, at the viticultural gardens of Vaud in Switzerland. It tends to prove that the must of the vines treated with sulphate of copper was always richer in sugar than those which had not been sulphured, and that the wines of the former were richer in alcohol. Some object to the poisonous properties of the sulphate of copper, but the minutest analysis of the wines failed to show the least appreciable traces of copper.

CLEANING WINE CASES.

When a cask has been left to dry, or has a bad musty smell, it has to be well cleaned before using. First take off all the bungs and let the air come in for a day or two. . Next take half a quart of common sulphuric acid mixed with two quarts of water and pour it in. Roll your barrel over several times and let it rest a day. Roll over again and add 12 ounces of lime and four ounces: of potash. Roll over several times, then: let the mixture run off.

Wash your cask several times with cold water first, next with boiling water and last with cold water again, to make sure thereis no trace left inside of the sulphuric acid.

If your cask is only very dry and has no bad smell, the above is not necessary. After soaking it well with cold water, and washing it with warm water, take a few chips of oak wood, soak them in good wine brandy or alcohol, and roll them over and over in the cask with a little warm water and your barrel will be all right,

TEETOTAL LITERATURE.

A society of Scottish scholars are now engaged in the preparation of an edition of the poets, in which all illusions to alcohol are to be carefully suppressed. In their new editions, Burns, it is said, will loss nearly all his holiest lyrics, and scores of other Scotch poets, to whom the praise of whiskey has been what that of wine was to Anacreon, will find there hest paragraphs depleted. "A teetotal edition of the poets of all ages," says the London Telegraph, "would be a enrious sight. Anacreon would almost disappear. Some of the most striking scenes of Homer and Virgil, from banquets of the gods to heroes' feasts, . must be cut out. Horace would not bsallowed to praise the Falernian, which must. have been better than its modern namesake, . to justify his enthusiasm. English literature is also full of lyrical outbursts in enlogy of drinking. One of Shakespeare's. plays hinges on Cassio quarrelling in his. cups, and the murder of Duncan is made easy by the drunkenness of the grooms. The expurgation must even go higher than: Homer or Shakespeare; it must touch that sacred book itself, refuse to record the miracle at the marriage of Caus, and blot out the psalmist's allusion to wine that:

OLIVES A WHOLESOME FOOD.

Retail grocers who have been long in the business, says the Chicago Green, and ive operated under favorable circumtances, have stated to the writer that they rave noticed an increasing demand for the iner variety s of goods - for more luxury s n fact. To handle these finer goods, and me assured a sale for them, is the goal a etail grocer should strive to attain. A great many of such goods, while they soem ten minutes drive from railroad station, it first blush to come under the head of (Forty acres planted in the finest variety of nxuries, need not be so regarded, and if vines. The balance rich river bottom, and heir values were properly understood rolling land capable of the highest cultivawould find more general use. The obve is tion. Several never failing springs and in excellent example of this, and we cannot better develop this idea than by quoting an article from August "Table Talk:" "The dive has important qualities to recommend upoxe il d. Good fishing and hunting in ts use for the table-qualities which should sertainly secure for it there a more general | I the most elegant and profitable suburban friendliness than it now has. One block -and we presume the only one-in the way, is that to which we have already reterred, namely, that its taste is, at first, disagreeable to many people; but the pulatsoon gets over the squeamishness and in a little time and with very little practiclearns to take them with intenso rolish,

But, laying aside their palatableness, there is another consider ofton which has or ought to have too strong a chain upon our gastronomic aff ctions to be agnered. I allude to their wholesomeness in spurring the digestive machinery when it is inclined anywise sluggish. Therefore, let me say to the dyspeptic that if his taste does not now thourish or the olive, he should lose notime in cultivating it until it does; for he will find hidd n there not only an amount of deliciousness he little dreams of, but also more repairing and Inbricating material for his weakened other man, than in all the pills and medicinal draughts that were ever invented for the stomach to concect.

I would also state for his edification, that, in the south of Europe, where the olive is extensively used as an article of food, indigestion is scarcely ever heard of in fact so little known that the world itself has no comprehensible meaning. He must take this, however, as heresay evidence, for I speak it not of my own knowledge. Still, from personal experience of the wholesome. neas of the olive, I am prepared and willing BY PROF. GEORGE HUSMANN to believe it myself, and it can work no serious injury for the dyspeptic to do like-

The writer might properly have laid atress on the value of olive oil as aid to digestion. It should be more generally used. In the cities and larger towns of of our country moderate quantities are sold but in smaller places its use is a rarity

THE Scottish People, of Glasgow, says: The red bandana, which is now the banner of the Pree Fraders in the United States, was, strangely enough, the banner of British Tree Traders over sixty years ago,"

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SPRING PRUNING MUSCATS

The last few warm days have decided about the desirability of spring praning the Muscats. The opinions as to the profits of such pruning have been much divided. Charles A. Wetmore, a few years ago, when informed of the practice of cutting back the too exuberantly growing young brauches of the Muscat, shook his head and enquired where such a practice had a precedent. But his and many other grape-growers' experience was acquired in climates very different than our own. The advantages as claimed by those practicing summer pruning are many. In the spring, when the young shoots on the vines have reached three or four feet, these shoots are exceedingly tender and easily broken. A heavy wind at that period is not an uncommon thing, and its havec in an unprotected vineyard is damaging. After such a heavy wind thousands of shoots may be found broken from the main vine just at the junction between the old and the new wood. A few days more perhaps the green branches would have been sufficiently toughened to withstand the wind, but at the critical time much damage is done. To counteract the force of the wind if it does come, and as a safeguard, many vineyardists cut back the young shoots one-half or more. The proper time is considered just when the herries have set and the blossoming of the first crop is over. At that time a certain stagnation of the flow of the sap takes place, and the cutting back would then not have any sudden or unusual effect on the vine. The immediate effect of the cutting back is simply to lessen the force of the wind on the branch. After the cutting there is never any danger of the branch being broken by the wind. But a more far-reaching effect of cutti g back is arrived at. Soon after the cutting back the sap begins again to flow upwards and shoots make their appearance at every joint. Thus instead of the single branch cut back, four or five branches will grow out and shade the vine. This shading of the vine is of greatest importance. The Muscut is the highest bred and most tender of any grape, and exposed to the direct rays of the sun, the berries will burn and dry up, causing not only a loss of the crop, but an extra expense in picking out the dry and spoiled berries. Too many of them will seriously injure the value of the raising or even make them nusalable.

Vineyards which have been summerpruned well in the spring have in this time of the year large crowns to shade the ber. ries. We have lately been through several of them and a very few herries were seen damaged by the sun or heat. On the other hand, vineyards in which no summer pruning had been practiced had to be protected in different ways. The favorite way is to take some of the larger branches and carry them crossways over the crown of the vine, thus increasing the shade over the center, where most of the grapes are found. But this method is more expensive and we believe not so effective. If we would ask to recommend either way, we would advise the annmer pruning every time, as far as this locality is concerned. In other parts parts of California, where the Muscat does not grow so vigorously, summer pruning may not be of advantage; here it decidedly is.

Inferior wines ought to be distilled and not sold to San Francisco dealers. A sale of 100,000 gallons of inferior wine injures the value of double that quantity of good

GRAPE DRYING.

The Livermore growers are proceeding with their undertaking of finding profitable uses for grapes. According to the Livermore Herald report of a recent meeting of vine-growers, Chief Executive Officer Wheeler, who was present, presented an extensive group of facts regarding the drying of wine grapes in this State for Eastern use. He stated that he had corresponded with a great number of Eastern commission men, who had all promised to look into the matter, and many of whom report on active demand for this cheap class of raisin. He had learned that several hundred tons were shipped East last season, instead of two carloads, as at first reported, with good results. Any commission merchaot can handle grapes; very few can handle wine. There has been a great deal of experimentation upon the subject of covering material. The best has finally been found to be common Manilla paper dipped in boiled oil. It costs two cents a square yard; it comes in large rolls. The grapes should be dried on the ground. gravel being the best, a few trays being provided for the small bunches. Side-hills, with a southern exposure, are better than level ground. Covering at night is a good plan, as it retains the warmth, excludes dew and saves an hour or more of time each morning, After drying, which will require about two weeks, the grapes must be stemmed. James H. Porteous of Fresno, has a simple apparatus for this work, which with the fan for cleaning, cests but \$50. It will stem and clean ten tons a day. One will do all the work of Livermore Valley. This may be done at any time,-there is no burry about it. In making trays no redwood should be used. It stains the grapes. It requires 480 square feet of space to dry a ton of grapes-a plat of ground 20x24 feet in size. A drying a days the grapes can be put into much less space. After grapes are wilted they will stand considerable moisture without injury. Grapes will dry many days sooner on the ground than on trays, Common cheese cloth may be substituted for wood for drying the small bunches. It will not rot and cost but three cents a square vard. Old grain sacks are good, but will rot out under the influence of snn and moisture. R. B. Blowers, the father of the raisin industry in this State, heartily approves this grape-drying project, and states that our wine men had better sell dried grapes at 215 cents a pound than fresh grapes at \$12 per ton. It might also be added that the common wine grape of this valley, when ready for drying, shows 28 per cent of sugar, 10 of seeds, skin and pulpy matter, I of tannin and acid-giving a total of 39 per cent of solid contents. To this may be added 5 per cent of moisture. Then throw of 11 per cent for a general shrinkage and we have a proportion of 1 to 3 for the dried as against the fresh product.

AMERICAN WINES THE HEALTHIEST.

Wine is a luxury, to be sure, remarks the Brooklyn Eagle, but the common acid table wines are much used, even among people in moderate circumstances in this country. In Europe a family would as soon think of sitting down to a dinner without bread as without wine, and the use of it seems rather a safe-guard against intemperance than an incitement to it.

however, it would be an act of wisdom to moderate the import tax in order to discourage the adulteration of the foreign article and encourage the sale of domestic wine-which is the purest known-at cheaper rates. Much, if not most, of the claret that comes to this country, and nearly all the Port, Sherry and Madeira is sophisticated, and not a little of it is American wine sent abroad, colored with logwood and other dves, increased by additions of water, fortified with raw spirit and sent back to us with French labels. The police of Montpellier, France, deserve the thanks of all wine drinkers for their scizure and destruction of 25,000 liters of wine sent out by a large exporting house and waiting shipment at the railroad station. This stuff was found to be so outrageously adulterated that the police staved into the casks and the fluid poured into the sea. The amount of indigestion, stomach ache and the number of red noses spared to New York club men, who would shortly have paid big prices for it and St. Julien and Pontet Canet, can hardly be determined, but the wine "doctors" have perhaps received a set back. It would be a good thing if adulterated edibles and potables in all countries were destroyed as expeditiously. Excepting champagne and sherry American wines are the healthiest, the purest and the best, and if they came a little more within range of the popular purse, their use would limit that of the inferior products of European vineyards and laboratories.

WINE MATURITY.

It seems a misnee of the word, remarks the Analyst, when we apply the term ripening to such products as wine and liquors, yet as a matter of chemical and gastronomic science, the application is not only appropriate but even happily suggestive. The analogy between the process undergone by a peach in passing from the green to the mature stage, to that undergone by a wine or liquor is, if possible, more than an analogy, and closely approaches identity. The fruit changes in texture, becoming softer and less fibrous, the starch is modified into glucose, minute quantities of hydro-carbons are broken into the compound ethers and alcohols, which make up the flavor and bouquet, and many injurious substances are broken down and destroyed. So in the ageing of a Madeira wine, a whiskey or brandy, there is a change in the texture, or, to use a more accurate term, the specific gravity. microscopic amount of germ is metamorphosed into glucose, small quantities of the fusil oils are broken into more composite compound ethers and alcohols, and other elements are lost or destroyed. It is no exercise of the scientific imagination, but a demonstrable truth, that a pear which passes into delicious and perfect maturity npon the bough, passes through the same development as a cask of cognac in a well appointed ware-house, The analogy or identity runs even further. Unripe fruit is notoriously difficult of digestion, producing serious disorders. Its taste and odor are frequently repulsive, if not at least disagreeable. It is used only by the ignorant, and notably by the small boy, so often ridiculed by the humorist and paragrapher. Unripe wines and liquors often exert a corresponding influence upon the assimilative system. A new or "green" Bordeaux or If the use of this mild stimulant and Burgundy frequently causes vomiting; fresh Isabella, \$1 to \$1 25.

digestive is to continue in this country, ender and grape juice, diarrohea; raw whiakey, gastritis and enteritis. Such goods are never used by the connoisseur, but only by the ignorant. It requires but little knowledge and experience to discriminate. between ripe and unripe fruit. It requires much to distinguish between ripe and unripe wines and liquors.

SORGHUM SIGAR.

A South Carolina exchange in discussing the action of the National House of Representative in recently passing an appropriation of \$100,000 for conducting experiments in the production of sugar from sorghum, says: The Senate will probably agree to the appropriation, and the experiments will be continued by the National-Agricultural Department. There was considerable opposition to the measure in the House, and the opinion was was freely expressed by members that it was impossible to chrystalize the saccharine matter of sorghum juice. The members of the House have as much right to an opinion on the subject as any one else, primarily, for it is just as possible for a congressman to have some ideas of chemistry and chemical possibilities as other people, but it is not reasonable to suppose that the Department of Agriculture would ask for the appropriation and continue its efforts in this line, unless there was at least some hope of auccess. If we were not misinformed the production of a good article of chrystalized sugar has been accomplished by sorghum growers of the Northwest, though success or failure have not been clearly ascertained. When we reflect upon the great importance of the subject, and upon the immense value the discovery of a method of chrystalizing the saccharose of sorghum would be to the country, no one can doubt the wisdom of Congress in providing for continued experiment and research. The \$100,000 thus to be expended may develop an industry that will be worth many millions a year to the country. If the farmers of this State could convert sorghum juice into good "sweetening" sugar they would find it very profitable in the production of the home supply, if not in making it for market. Let the experiments go on.

PICKING AND PACKING GRAPES.

In a recent issue of Vick's Magazine, a grape grower describes the careful manner in which grapes are picked and packed at an establishment in Chautauqua county, N V. The work is done by careful girls. The pickers are not allowed to touch the hunches with the hands, but to handle them by the stem. In packing, the cluster is lifted by the thumb and finger of one hand, and with the sharp pointed grape sciasors in the other, all green, imperfect and bruised berries are deftly and rapidly removed. The bloom of the grapes is thus perfectly preserved. Of the 10,000 baskets sold last season, the average weight was 87-10 lbs. per basket. The packers soon learn to place in the clusters even and level. The Concord is never fit for shipping long distances withont being carefully picked and then wilted before packing.

The latest San Francisco pricea for grapes are as follows: Rose de Peru, 40 to 50c; Muscat 35 to 50c. per box; Malvoisia, 15 to 45c; wine grapes, per ton \$14 to \$17; Tokay, 35 to 50c; white grapes, 25 to 40c;

A LIVING VANE

This process of ornamenting vases is by no means new; but as the thing is far from from being common, and as it may give some one a new id a by which to help beautify the home, we have deemed it worth while to give a representation of it so as to show the result, and to indicate the means employed to obtain it, which are most simple. Though any kind of vases can be used indiscriminately, these in nuglez d terracotta are proferable, being porous. In such vessels the water with which the vase is filled percolate constantly through the sides and moisten the plants which are fixed on its surface. This kind of vase is, however, not indispensable, for we can ornament all kinds, whether in glass or metal. In the latter case it is necessary to prepare the surface so as to convert it into a sort of soil, which it really representsan operation which is easily managed by the aid of a pole of cloth or flannel which is fixed by the means of a little pack-thread or thin iron or brass wire. This being unseed might as at b. described.

If a porous vise be used it is filled with water or, better still, left in a pail of water to soak. After a lapse of twenty four hours, when the water has thoroughly saturated the vise, it is laid on its sid , and the seed sprinkled slightly over the surface, taking care to turn the vase in differ at directions. in ord r that the whole surface may be well covered with seed. This operation terminated, the vase is placed in a dark closet for some time time, and, if possible on ler a glass frame, so as to preserve humidity and facilitate germination. When the points are developed, and in case they get detached from the vase they are secured by tle packthread or fine wire, which soon disappears under the vegetation. If a nonperous vase, after having well scaked the cloth which covers it the seed is sown upon it and the same care is given as has already been indicated. When a perous vise is is the water filtering slowly through it that feeds the plants which cover the sides. If that be insufficient to insure vizorous growth, the vase must be watered, taking care to pour the water cautiously, so as not to detach the plants. If glazed or metal vases be used, glass bettles, for instance. they must be constantly watered; the water should be poured from the top over all, so that, in descending, it wets all parts of the cloth, which should be damp. When ver the plants droop they must be refreshed by watering them carefully. The vase should stand in a saucer or plate. The seeds used should be very fine, ann especially light and of easy and quick germination, common carden cress is most suitable from its great rapidity of growth, the easy and also on account of the little nourishment, wine, the plant requires, but it has several drawbacks first, it has a tend-ney to sink more or less, then to have gaps, to show flowers very quickly and then to wither away. The common ryegrass is also suitable, but experiments with other seeds may be made, Claret, more water." We ought to multiply and vary the experiments until satisfactory results are obtained. The following kinds of plants might prove snitable; Crested dog's tail grass and yellow clover (Mediago liquiday), flax but particularly the Timothy grass Phenin Proteuse), which appears to be singularly appropriate for this mode of ornam-utation, Let our readers experiment and write us

the result of their labors,

WINE TO ORDER

In Pooles tales, says a writer in the London Tubbs, the reader gets an insight into how wines were made at some hit is,

The author, mosting a strong ran a country churchyard, recognizes Burby, the former landlord of an inn he us d to fre quint near Cambridg , it appears, retired to enjoy the fruits of his inclusion. Facility into a confid nitral discourse about the was in which this worthy o adjected his busi ness, the author receives from him a most luminous and satisfactory account of his

"You can't dony it your wines were de testable Port, Mad Ita, Claret, Chamnache-

"There, now, sir, to prive how man h gentlemen may 1 mistaken, Lassure you. sir, as I'm atchen st man, I never had but two sorts of wine in my cellar - Port and Sherry."

"Y's, sir, my clar t, sir. Gentlen, n who pay their money, sir, have a right to be served with what wer they may please to derstood, the means employed to grow the order, sir. I n v r would have any winein my house, sir, but port and sherry. But to explain the thing at once, sir. This was my plan sir. If any one ordered Madeira From one glass of Sherry take two glasses of wine, which replace by two glasses of brandy, and alld thereto a slight squeeze of lemon, and this I found to give gueral atisfaction. As to the pale and browns sherry, sir, a course of glasses of nice, pure water, in place of the sime quantity of wine, made what I use I to call my delicate pale (by-the-by, a squeez of i mon added to that made a very fair Bue Bust, and for my old brown sherry, a lottle brown sugar was the thing. It looked very much like sherry that had been twice to the East Inpassing round, in different directions, a lit- dies, sir, and, indeed, to my customers, who were very particular about their wines, I used to serve it as such."

"But my Port was the wine which gave me the most trouble. One gentleman would say, 'Burley, I don't like this wine it is too heavy? 'Is it, sir? I think I can used it should be kept constantly full, as it give you a lighter." Out went a glass of wine, and in went a glass of water. " Well sir.' I'd say, thow do you approve of that: · Why-um -no: I can't say-' 'I under stand, sir you like an older wine-softer. I think I can please you, sir. Pump again sir. A New, sir, says I willing the decanter with a napkin and trium; heatly helding it up to the light. " try this, if you pleas -, . That's it, Burley-that's the very wine, bring another bettle of the same." one can't please everybody the same way sir. Some gentlemen would complain of my Port as being poor -without body. In went me glass of brandy. If that drin't answer. 'Ay, gentlemen,' says I, 'I know what you like, you like a fuller-bodied rougher wine. Out went two glasses of very quick germination of its seeds, and brandy. This as d to be a very favorit-

"And your Clar-t?"

" My good wholesome Port again, sir. Three wines out, three waters in, one panch of tartane acid, two ditto orns powder. For if it again expires court 1 of the given a fuller Claret, a little brandy, for a lighter ment to aboush the internative new few

"But how do you contrive about Burcondv? "

"That was my Claret, sir, with from davor. As for Champagne, sir, that I makmyalf"

waggish look, thenr by everybody in keeping of the grape than any oth rice unitry and r own Champigue, else what can be one of al the goosele rms?

All right, my ritural for halos and por

in ta singly ises or hotels can be on-

ir curd at this season of the year, at let is such a joire wit demonsts of ir that it thorms every one. It is simply a reso perwhich should be opened for about one hour vivia ing edita nembray sal A writer in one of our English containers mesid scribes the best method for st in per, and in doing it suggests the proper tion of the rose stock should be little but the ear staking member of the family, an y r forgets anything. Gath r th totals in the morning; I total no store box. I place, toss them up lightly forces. In the dry, then jut them in lay re, with each specials low reach layer, in a cirgo over it lish = a class butter dish is a conviction re-You can add to this for six ry in runnes, till von have en or thistick. Goin no part to a quart, according to the size of the jar; star every morning, and let the whose stand for ten days. Then transfer it to a glass fruit jar, in the bottom of which ver have placed two ounces of alleries coarsely ground, and as much stick cinna- and linert to a gentleman who has been mon, broken coarsely. This may now stand prominent in Massachusetts politics and is for six weeks, closely covered, when it is ready for the permanent jar, which may be as pretty as your ingenuity can devise your means purchase. Those with doubtcovers are the best, and very pretty ones. in the blu- and white Japanese war , holing over a quart, can be bought for a few any, said he thought it a pity that they shillings.

spice, cinnamon and mace, all ground in tied, but that he had to drink it all to save fine , one can; of orris root, brais d and waste since the corks were so made that shredded; two onness of lavender howers, this couldn't be gut back. and a small quantity of any other sweet seented dried flowers or herbs. Mix to gother, and put into the jar in alternate lay. ers with the ros stock, and a f w drops of oil of rise, g rantum or violet, and p over the whole one quarter jint of g ed ogne. This will last for voirs, though from time to time you may all a little lavender or orange flower water, or any micperforme, and some s asome a few treather is is tals. You will derive a satis not, is from the labor on y to be estimated by the happy wners of similar tars.

WHISKEY AS WINE

Fin Courer-Item in an article which i laims is not prohibition her temperate talk, but simple riff rence to produced post-

Mon's votes next November or technilwine, and in went two or three glasses of the points of this government. These is not merely a campaga to change posture ters and revenue officers, it is to it the policy of the gov rune at to verle many large and important in fusir, s

> The B patentian party has policy I dewhiskey. The effect of this world to ter dus the price of whiskly at bast on had

three to six drops of bergamot, according this article, and we are not 2 and to portar as gentlemen liked a full flavor in a delicate any of the cyris of chiap warsh youth ask Californians to look at this choop whishey is ign't as how always expressed surprise yailf" proposition from a business stendpoint, at the organisation growth of our vines, and "How do you mean tof course," Burley? [California is a great wine producing State, or p. 4 from Ex

"Ob, sit," he said, with an innount yet It has no re-iron a lapted to the cultivation the sun C of series on business princiills in inter-t line vi inhing the use and ther astig to the referance wines. Wine THE LAXURY OF A ROSE JAR from grope at sub-map stand heathstationals tan arrors As a drink it is a single important with whickey, and the high proof the stores outstantly giving the ells to the wine. Once as ten y conter to heap will and do it whick y and the wise market and I went but patition has be on equal terms with the victor of the baser je byt wol crowd the bott room of the noulk t.

A compaguiserial of three score charers might) written up in this me feature dith product ampaign. If they give heal to their way a and consider their course, n tagrapa grawer or wine merchant in California will vote the B publican ticket this year

Cheap whisky is fraught with more herm to the material inter-excet Califorura without locking at the moral side (than the Chinese invasion

CAREFUL OF THE CHAMPAGNE.

A worrespond at of the Boston Herald

"I was creasing on the steamer to Liver-1 00 a few years ago and found myself som times spoken of as a statesman. On three or four diff rent days I opened a quart of champagne and always invited here to poin in in hinking it, an invitation h n ver d clined. Finally one day he rdend a paut, and instead of off ring me min't put it up in smaler bottles, because Have ready on counce each of clay sand a just was more than any man really need-

HOW OUR GREAT NATION GROWS

New Ether, as publishes the following statement showing the progress of the war-I us and some sof the country for the week and has August 4 Buildings costing over \$5 to t sach , 3 t, coming \$7,000,707. brilges 15, costing \$500,050, churches 40, costing \$1.483,000; electric light companies and now points 3, capital and cost, \$315, 000. 248 companies 2, capital \$20,000, manufacturing companies 16, capital \$6,435,000, mills, factories, etc., 70, costing \$2,418,170; mining companies 17, capital \$20,772,000 ratioads and extensions I, costing \$100,000. and water workt 17, costing \$534 000, making a total of 530 new enterprises, calling for the investment of \$40,275 927.

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W. Liv. always put this advice in R in mb r th re is nothing in rid of at the by hirying an small animals which n and fished firm is have more or you your amount vineyard, and our



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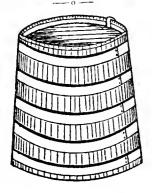
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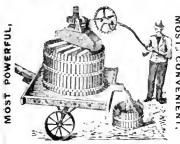
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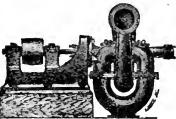
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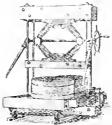
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VOL. XX. NO. 12.

SAN FRANCISCO, SEPTEMBER 14, 1888.

PRICE 15 CENTS

WINE.

Its twee as a Temperance Agent.

Paper read by F. Pohislorff beter the Sixth Annual State Vita ulteral convention

Desired to expr ss my views about wine as a temperance agent, I glidly accepted, for some in this assembly know that my feelings are strong on that subject, and the contrary assertion, namely, that the graps grower, through his product, tends to pandering to the view of tippling strong drinks, has appeared to me ever so absurd, that those who hold such mistaken notions must be either ignorant, or d vond of good sense.

Wine is a true promoter of temperate haloits. The simple explanation of this axiom lies in the words, "Wine is food, do not abuse of it as a dram. ' Could I be convinced of the fallacy of this truth, and of the justice of extrem prohibition ideas, could I see that wine is the poison these represent it to be in one im- with distillates I would at once change my life career, and have nothing more to do with wine. The experience and observations of high thirtyfive years as a wine man, reader my per sussions about rational consumption so firm. as my pride is great to belong to a profession respected and honor of by a hundred millions of civilized, none, and soler people in the Oid World. It tus hop that in the New World these attributes are not to be disconnected with wine production and wine consumption. Altretty positive confirmation of the truth of the vews of the civilized world on the solutet, who, become ing by intuition the views of every on, who knows wine, pure light wine, is the spontancous expression of so many speakers during our Convention- as a brought up in different rearrs, and under dubtrent influences. More than one among us was a total abstaine until he knew to use wine. The power of truth is inherent. I ruth is a a power, called forth without any stimulus. because it lives nourished and growing in the mind of him who searches, or of him whom circumstances had to experiencing it in the course of his cailing. Error needs excitement by the zeal of sentimentalism and ignorance, leading to fanatiersm, and fearing upon negative observation,

It is not even given to every one to know what he does not want, but only by invest; | Hungary, the Slav populations of the southgation on both sides, the good and the had, wast of burops, Greece, Germany, wherever

man finds out what he wants. Could those who doubt the virtue of our product, or, rather, could they bearn our sentine uts here at these gatherings, learn our habits of life see viticulture as it is, perhaps some extreme to totallers might be reconverted to tene rational temperance

For the alimentation of the French nation one thousand three hundred millions of callons of wine are needed annually Cider for the same purpose is used in France to the amount of some six hundred million gallons. According to all authoritr's, and on the basis of observations spread ing over many years, the vice of intemperauce is comparatively insignificant in France as far as it is traceable to these light beverages from fruits. The reverse is the case, caused by a large amount of distilled drinks consumed in parts of France where wine is less accessible. Raw, new spirits, obnexious compounds classed as liqueurs, that the adish absinthe, etc., have to inswer for the percentage of drankards ending is the madhouse, juil, or by suicide.

The generalization of the small wine called Priquette, made by exhausting graps pressings and lees by fermenting, is a blessing in southern European countries. It an swers the purpose of butternilk, eider. milk, beer, acrated water, and the druggist's summer bar beverages, in countries not privileged to plant vineyards. Piquette is a naturally nourishing, refreshing, and tood-assimilating drink for the poor in rural populations in most grape countries The moderate strength of Piquette, and the aghtest direct grape wines, 5 to 8 per cent aimted moreover by water addition, renders them ht for thirst quenching, and withal strengthening and tome to the hard workis in the hot season, and for natrition of nit persons of the household. Where these light truit beveniges are used, depend upon it, the danger is small, that people crive for, or even desire, ideolol. The natural taste tends to fruit acids.

Italy, now at the head of the list of the wine-producing countries, has a large amount of wine to spare for other nations

 $T_{eB_{\nu}}$ twelve times more than the whole of the United States wine crop amounts to, Italy can sell out of the country over the large home consumption. The result is a sober nation. The percentage of draukards in Italy is very insignificant. Abstria,

wine enters into alimentation at the family board, there society is comparatively frefrom the habitual view of inchroity. Baki, grain distillates and others, which soldon are extensively used, where wine readily and at moderate cost is obtainable, cause more intoxication and its vil consequences. than the one-hundred times larger consumption of wine.

In Spain and Portugal, the Spainsh and Portuguese American countries, in every one of which wine is a national table drink, the same is time.

The little Argentine Republic, uses more wine than is imported into the twenty times more populous United States. People who know Uraguay and Paraguay, will testify to the absence of arunk messs there. As a rule, people habituated to wine at the meal, will shrink from imbibing a distilled strong drink, be the pony glass over so tiny. It will make the young ones and females shudder. The fruit acids in a liquid of light alcoholic strength will disqualify the person who uses it from finding attraction in a distillate. Only the example set by yarents allows young persons to consider spirits a national, and to give it strong, a legitimate loverage. Only where from early voutle the mauseating, throat-burning sensation has been overcome, I hold it, any relish can be found in strong drinks.

That nature converted the sugar in the grape by fermentation into alcohol as an inherent and preservative element in the whole of the composition of wine, is a highadvantage to nutrition, only thereby is the maturation and improvement of wine possible. The hygienic properties of the amalgam would be less, had the sugar of the grape remained unconverted. At the dinnor table the amount of water which naturhas put into wine at the percentage of \$5 to 90, may be doubled, trobled, and the 10 to many a tealer in wintry regions in certain 12 per cent of alcohol our wines usually conam, be lessened thereby to 6 or 1 per cent, cand for the young ones this should be by the daily use of wine. It is not the in- which are fortified, as every one should discretion as to quantity which is instilled by habituating children to their modicum of it, may, they look spontaneously for the refreshment, the nourishment, for satisfy, in the lightest element in wine, water. For the diluted drink virtually consists of a The alceholic element, while entering into of tartaire acid in the most perfect combination in water

Abuse of with is possible.

tures inclined to excess in anything. Where the rational use is practiced, and inclination to abuse is observed in an individual, wisdom of the parent comes in. But better than total privation, the example of the masses, who, by intuition, learn to practice moderation, may serve to check and hend mordinate appentes

Chinatre conditions, the calling of the individual, leading to expend more or less vital energy, then example and habit, these factors seem to determine the kind of ali-

According to the degree of capability to take advantage of hygienic experience connocted with nutrition, wise or unwise customs are formed. In new communities, such as constitute the United States, all manners of nutrition - xist. Abundant elements exist around us, to suggest, and draw conclusions about the value of different methods for the best adapted ones according to regions, chimates, products and different circumstances generally on this vast continent.

Substantial nourishment has to maintain heat in morthernmost States, or in places of great devation, while the warm south needs light, cooling beverages, corresponding to light, solid nutriments. Ten and coffee may warm the blood in cold regions, but for generating and preserving the necessary blood heat, beverages containing a certain proportion of alcohol will be a more adapted liquid nourishment, at least for hard workers out of doors

The temptation to excessive absorption of the product from the still has caused people to check the facilities for procuring fire waor in certain States. To have prosended it altogether, however, seems extremely improdent, unless a substitute be presented, for what, in a degree, is a good thing for eases. A light wine acts coolingly, and is a godsond in foreid weather, the best febrifuge that the pharmacopa is centains. So A healthy constitution is benefited the same wine, suggested or sweet wines, know, diluted in hot water, may act as a splendid restorative in cold weather, and fare a natural substitute for ardent drinks

But, along with the use of this substitute, the rule of moderation should be taught the unit and acting beneficially, should not ontweigh the other valuable ingo dients of

There are no I vine competitive and acids

reply; you offer another tempter. Try the experiment, practice it wisely, is my rejoinder. Winc is a means of weating people from strong distillates. Human nature will not, in most eases, submit to total privation

I must be permitted to widen the field of the theme given me to treat. The war waged by ultra-temperance people against our product, we may presume simply incidentaly, along with what is desired to check, alcohol consumption, should call forth voices, for defense. Moderation in all things, and notably in our diet, is an attribute of every well-bied person. To promote temperate habits is a pleasant task, a bounden duty of parents and teachers. To assist in correcting natures given to excess in strong drinks, is an obligation for every patriot. Every one of us doubtless is au adherent to these principles, and where the objects of associations battiing against the abase of alcohol, is centered in these rules and reform sought properly and intelligently, who is there among us who will not gbally call himself a temperative man Who, in fact, is there among wine menthat does not train his children in the practical abhorence of dranken babits! Dram swilling, strong drinks at any hour, are the source of infinite misery. Reform of the tippling habit may safely be acknowledged to be a national moressity

A certain percentage of mankind is of criminal propensities. A certain number from every thousand reside, or should be in prison. Despite the moral teachings in spiae of punishment, a proportion of those trained in the fear of the Lord are weak and sinful. Equally so a certain proportion in society fail to dominate their appetites. The habitual drunkard should be re deenied. Let the strong liquor be kept out of his reach if possible. Teach the young the terrors of vicious indulgence. Teaching alone may not avail, just as in other cases of sin. There is a simple and efficacious means of promoting sober habits, Our mission, that of our product here, steps in. We produce and dispense what nature intended, by proper use to bring about and assist, the desired reform, the regeneration of eravings, and habits inconsistent with true temperance. Our product is for the home; it forms part of our diet.

Not to every constitution, the fruit acids in any proportion, may be congenial. neither are water, milk, tea, coffee. Many a digestive apparatus has been ruined by water. The proper use for water, and above all, the nature of waters, for there are ever so many kinds, conditioned by salts or organic additions, is a study. Water at different temperatures, ought to be inquired into. How many advocates of water have to apply to the physician to correct the havor undue indulgence in water has wrought? Wine may not be a panacea for all, nor is water; but for natrition, and restoring spent energy, the most perfect liquid mankind is blessed with is wine.

Ages have passed, accumulating millions of billions of proofs that nation. that cultivated the grape and use its fermented juice as a natural part of untrition are as frugal, industrious, and abstemious, as they are possessed of all the attributes of bodily and mental health and vigor. And, as no degeneracy, no decay, has thus far followed their rational habit for ever so many generations, no falling off in strength seems possible from its continuance.

Let it severely alone, the extremst will liquid blood and hilarious temperament, his actions because other houses and places stroyed that wine is a laxury accessible only who knows how to use wine as Nature designed, the heetic dyspeptic abuser of iced water, of sullen disposition; the enervated man in the Orient who g'uts himself with strong coffee; the person of excited and shattered nerves longing in vaiu for sleep, who uses tea in excess for the non-assimilation of food, and let the reflecting physician describe whose methods of autrition should be preferred.

Fruit acids are indispensable. The acids of vegetables are obligatory factors in wholesome diet Refreshing is the action of the acids of the citrus fruits, and in given doses they assist digestion well. A lemonade may be a substitute where wine cannot be had. But your acids from the grape in the best combination, inimitably prepared by Nature in wine, are more perfect in their effect than any others. No druggist will ever improve upon that wonderful compound, shaped by fermentation of the juice of high grade

The united power of millions of smallbrain d Neal Dows and St. Johns will never be able to drift, abote in a judgment, that will live forever, emitted by a man that bore in life the respected name of Professor Liebig. 11. said "Wine as a restorative, as a means of refreshment when the powers of life are exhausted as a means of correction and compensation where misproportion occurs in nutrition, and the organism is deranged in its operation, as a means of protection against transient organic disturbances, wine is surpassed by no product of nature or art," Wine as a dictary beverage was a toregone conclusion with Liebig, who lived where wine has that mission,

Eight years ago the staunch champion and greatest benefactor to our industry, the man of brightest intellect among us, wrote some sentences which are the brilliant expression of his feelings, strengthened by a then recent investigation in wine countries.

C. A. Wetmore wrote then on the philosophy of wine thus:

Wine is a civilizer in the family. It makes the dinner eventful, and prolongs its period of enjoyment. It brings man and wife into full sympathy, and lets the woman into the man's most entertaining moods. He does not save his wit and smiles for the barroom and club. It clinches matrimous atter the church ratifies it. It brings a sense of satisfaction, peace, and comfort, and invites to repose and not to excitement. Wine-drinking families are not divorced every evening. Their enjoyments are in close communion with freedom, frankness, and congeniality. Home is better than any club or bar-room and the bachelors seek such homes to visit. Pater tamilias does not need to seek the bachelor at the club or the saloon. Moreover, his luxuries become cheap and economical in this way, and he becomes hospitable. The bottle of wine makes the table cheerful; the tired and overauxious wife is not troubled about what she has to offer to her onest. Such tables offer uo apologies, and need none.

Wein, weib, gesting; these are the results. Wine is not jealous, nor timid. It unites man and wife, and they sing: their bearts sing if not their voices. Without wine, stimulus comes from behind doors and screens. It is secretive, and ashamed of itself. Whiskey, and even beer, to a great extent divorce the family relations, destroy home society, become ill-timed and unreasouable and lead to discord and complaint. A man leaves an ill-digested and poorly enjoyed silent dinner to wander in search of are not under his control. He ceases to know what he drinks and is imposed upon. He goes home relaxed, perhaps jolly; he forgets that his wife has not had the same relaxation, and his jolly temper is turned acid by her habitual tired expressions and cool neas. Women fight the aaloons partly from fear, partly from jealousy; neither habitual fear nor habitual jealousy are promoters of peace, good will, and contentment. Women then begin to think of rights of all kinds and women's rights in particular, W.ne at the table would make it all right

When we talk of "wine and women," too many think only of champagne and hilarity. This is not what we mean by wine-drinking Champagne is an exceptional luxury; but natural wines, such as sound, dry Zinfandel or Riesling, are never boisterons. They lead to no more excesses than tea and cof fee, and are rarely as dangerous to the atom ach. The condition of the stomach and liver rnles the head. Avoid distilled spirits, re garding them as drugs, useful when intelligently prescribed; avoid alcoholized wines and heavy beers, and there will be no datger of intemperance. Let prohibitory legilation reform itself. Seek out specific dan gers, and restrain them, as the sale of drug is restricted. Punish adulterations and adulterers and society will be very safe as happy. The vine has been called "th friend of man;" it should be called the mu tual friend of mau and wife. It is an auti divorce prescription.

There has never yet been a good opportunity to observe the effect of habitual wine drinking upon an Anglo-Saxon community No country mainly composed of Anglo-Sax ons has yet been a wine producer, to the extent of providing sufficient to supplant spirits as a beverage. We are to test the question in this State, and perhaps in the United States. The study of temperaments however, has much to base opinions upon. The Frenchman and the Irishman, when judged on equal terms, differ mainly in their habits, which control thought and for the good cause, and are inscribed in the sentiment. What might not wine have donfor Ireland? What might not whiskey have done for France? There are wine-drinking Englishmen (not the port and sherry drinkers). Irishmen, Germans and Americans. Observe, then, their family life, their gentleuess and gentility, their affections and their unity. American topers go to France and come back cured-come back gentlemen. Wine makes gentlemen as grog mak is brutes, Wine makes a polite tongue; whiskey makes a foul-mouthed blackguard. Wine carries with it the associations with which it is served; whiskey does likewise. Man is a machine — unimpressionable, unteschabb while at work: his ideas flow and he receives impressions when relaxed. How can a man become a gentleman who gets his relaxation in grog? "Grog!" means all that goes with and surrounds it-all that surrounds its consumer. The vine will build up our State, and enrich and comfort our people. Wige will cure dyspepsia, chauge a bilions temper, repair a broken health, relieve woman's lonesomeness, and mend our mantiers

Moral: plant vines, and make a home: drink wine, and become a gentleman.

From the plant we cultivate with such assiduous and anxious care, we supply in each year, improved quality what is best for pullic health, more pleasant to the taste, more adapted to the wants of the nation. With the ambition to produce only what is pure

to the rich. Our wines are good, pure, cheap. The poorest American who can afford to use milk can have wine of national production at a price not above that of the milk

Our efforts are poorly seconded. The cause of this at the bottom is the lack of knowledge of the proper use of wine; and it is the source of a heresy as gross as has ever perverted trath in any ag :

The secret of rational consumption of wine was revealed thousands of years ago to nations who, in all other regards, were ar below the standard of modern education. Our Savior, brought up under the Mosaio law, could see no harm in the use of wine. As His nation had done before Him, Jesus drank wine at His m al. H commanded His disciples to use it and remember Him. The secret of rationally using wine remails inrevealed to the zealots of prohibition, sho engraft M dammadan proscription of sine on the sound rale but down by the ounder of our religion. Sandy, in this light, f anything, drunk-nu s not verpted, degrades American civi iz piera prohibittou loes does that, as the phylox ra on the note of the vine saps the next of common use in matters of alice intation.

The false trachings that Am menus have to power of will, the d grading assumption hat every one is a demokard born, the false srophet's triumph ov r Christ's commandneut-all this is as had as the ignorance about the nature and off or of wine, which ingenders such insulting doctrines. No, it annot be indifferent to see our moral stanlard lowered by prohibition, which claims that the grape grower panders to the drinking house, and should be swept away, together with the superabundance of the sr-

The original idea of temperate use of beyrages, that may be abused of, is present in the temperance societies in the Old World. In their ranks thousands of wine producers, and distributors, and consumers, are laboring unuiber of zealous workers for temperance, That word wine is no bugbear across the Atlantic, nor infringers upon sober habita, To instance the great distinction made between nourisbing wine and intoxicating liquors in Italy, let me mention that when, a short time ago, the Œuophile Circle convened an exhibition of wines in Rome, they had, in the opinion of the viticulturalists. exceeded limits, in also admitting distillates for tests. The outery of indignation by the wine people found a ready echo in the press with spontaneous sympathy of the wine-consuming public.

When two years ago the demoralization of public sobriety became apparent in Switzerland, where the home crops of wine do not suffice for the family demand, and prices of wine from France enhanced greatly by a falling off of the product in the latter country, had rendered the same incaccessible to the poor Swiss, and largely caused spirits to augment in consumption, and take the place of wine, the matter was officially inquired into. The result of the deliberations of the legislature was a change of duty on imported wines and distillates. On the latter the duty was raised to a figure, and the duty on wines considerably rebated, This was the wise measure of an intelligent government to reform intemperance.

The reproach of brandy production is made to the grape grower. We do bear responsibilities where poor and fresh brandy and good, we have succeeded already in is put into the hands of the public. Gov-Compare with the southern European, of some relaxation. He ceases then to enjoy reaching a phase in which the idea is de-ernment will confer a boou on public health

if our good brandles or allowed to mater. in bond for years. The great supercompy of distillates the more than difficulty to procure pure, old cognae from grapes, gives as a privil go, that is, to be the products of sec what the physician wishes his patent to detain, whilm he prescribes the metured pure And where elimetry circumstances may rend r a small discost old brandy di sirable, or where a pony gives of the south may be convenient as a time of , if we prodational age that branky, we cannot be the demicable burgs calumny dipacts us too frequently in probabilities twidth Economical regions early as to take a leantage of peop alv usurg averaged on at of the grape. Beingly production is but ment at al to wine making. Howhis know here to use brandy was by wall not book down upon the producer for making it good and pure Our hands are as clean as these of the grower of parches, apples, can, potates, beet root, or grain, of which distillates are made. Anyhe gran distillates inv sugators till us, kill a dog overs from wine is more benient on the poor in mid. Thus far, 2000 old grap to only a marks an indispensable near areas than

In whise hards has the membration of

emp range paint a less to Tall schools, the look earried out thurch, the hear, and we will the home, should be the natural set score to propagaion of the great term principle of medical ion. With the because I had may to group and add retage forms with a timp rine ilea hisr a hy femil propagitors. En rgy and zeal just as assay and to a redspining he mark, especially was recently negative inormation, indicate evaluational degraphs his has come to pass in larger as sam maters of temperation. Validing simplesty in celling, the originating divings has ginerted into the abstrakty ways hours are far lot of ignorance is on the group growns in or own Still, and man this us in some onthern count, s. and have list as turned her eyes to hear no boosting that to it's ood gift, wine, d. I n. d.d fi. by the pr snce of any sample, the Agricultural Had Rev rsid Mayta y best mally blessed ith sufficient equal positioning its them as made good people overs whith bounds he war against the multiplicity of sup rhous drinking Louis s, where win as hardgiven a plan, his bonex add as etghting the true me one of pervinting alreablic abuse. Amb to us local re-have stimated sentiment as nof exellent pople, ho only pady with the heart to corrupt bod sense, and the above to prohibition as been dragged into politics. Who then e those that teach that park asion of time rance prolabitions. These thich who we no instruction, but that of abise, and it upon the impulse of its priper can binstion; whe addressed unit mess of congrations, prig the from and meaning pire, if fire, kept to bounds and properly ill not consult others who know both sibs the question, and our botter explain the flue of wine to manking I, those to a h who d who are ast inished at the fact that that perence the true authorities on these mat cask. Use spiral corks, as they can be \$7.47

wine can explain its nature, but they will key. not list in the blind truch the so who can. The Sorbity of Physicians of D. C. is al-

Show me one habitual drunk in law a themsund Israelites. They follow the rules of their forefathers, and knowle ow to use wine f Rome who widat a medication in his dulygluss of ame at his morals, as Christian ike the chergy uses. Pope Lee takes please grounds, and makes his wine and drinks it. imation of human strong hato the extreme temperance be our cause. f thinking Christ's in line ions too difficult

I do not doubt but that some fallions of whisky or bia dy at other times? opers, containing such dangerous untruths.

individual remains really as a borns a tea- pers, should be called upon to clear, at the drivin an with a left retotaller, those touch who know not, those moreous percessions of clear facts and clues on ough staff or a decitive but no made a good, pure off graps beauty by a grain to whom a child used to its diluted dinner date things of which they also half the year to a second

> ify came to exponse the corse of pure wire They endorsed our anti-begus who had by a parition to Congress with great absents or his or the Field Let set in be tak in at one by our Vitical. wisely. Where is the priest of the Church tural Board to engage the familty in this Whenever even State in examining the presonnal one relato our product.

A further step should be teaming mize the up in cultivatory a viney and in the Vationia heresy of proscribing wine, by the compiler tion of a pamphb to a catchism, in which Let \log at chargement f and dominimations, the maked truth about war , the right in inwhick now the truth about win, there are few tiers of its use, its effect as distinct from who practs and tach from the pulpit and those of distillates, the nature of wine as in the wars of till. by their example. There are others, not the promot rof solar ty, be set forth. Let should the remark is been reclosed many of their class in other countries, how, authorized scientists prepare such hitter in fully with a strain a reason in many ver who fail to a built moderation to suffice work let a committee of men whose names have be dely develor wear problem your and teach, while sale condemnation of all are above suspicion occupy themselves with by right wine not to be excepted. This is such important paper; let hundreds of thous the carefully or smill, but a make every regrettable. If they believe they them, saids of copies go by mail all over the lives, nor any on . In botters of in mat. Union. Let light bounds, for prohibition ters of mod ration, well, their consciences, becomes bold, noisy and corrupt. True temmay be at a st. Bot I pity the man of aca - perance will be mightly, for it is the cons-I might obsertion who carries his under so of truth. Truth will provail and law a tru-

GOOD WINE CHEAP

A bely in Washington recently thought it . A traveller, in a letter to Emrine's c a cossary, in the native st of probabilition, to endur, says. Amorroan hotel proprietors still in or pervirt boxt-books for children by charge \$1 per bottle for California wine, viggerating the danger of all drinks that which costs them 20 cents. At that price on not vierte. So, shill not so it in the wor to the man to whom it is a new sorty ight of my translation of her id as though, And that it is a necessity, no man who val-Now, I to radius S in Francis to school book uses sound sleep and good dig stion will the expression of the islaminated brain of deny. Will any hotel man almot have itits author that "wine is a poison." This is, the he sells at that price to will any or oth a strong, and if that sentence is omitted, them stop and consider for a moment, how in Distorn text books, of course the lady I much more he would sell at 50 cents spoke of may wish to have similar heresies, per bottle? Will any hotel man tell us colled into presente intilliguees at once, why, if a guest drinks wine at his dinner, through necessary corrections of that stamp. he, the great, should not tak his saig of

In all the N w York hat Is the cooks are poisoning the minds of the growing general drink California, wines, and the guests joswater. And that's why the American hotel-Can we rest on our laurels, and let the Reeper Team't keep chotel, "and that's why wick-d work of ignorance and stupid senti-, we have so many cranks and so many dysmentalism proceeds. We have our enemies, Tepties, and so many people whose pit ry words. The miserable enfusion of the extremists, near our skins. They do phrase is, "There ought to be allow," etc., of the British M. u. a. Association, gives holsome, light table was with absoluted but. Is there no remody to be the truth in less many quartels on people, and so some starting seconds for the temperature deput wine pen trut, the darkness brought many people who want reform for other people. Pure mass have be a chain this on by our appointness. How can be protect. People. But not everybody lives at a hotel, | t : | commute of 4240 cases of of or esold commersts, which are the rist rests of truth and those who take their comfort at home have so get to my my and appear, in against the absorbities of prohibition ideas, a few directions will fill a long-felt want, which the habits of the passion in a gard the relicule, the astonishm at of other nase If you want your wine as cheap as the loss to also hold wire record time two crosses tions, our contemporaries, laying in this tel proprietor bays it- not sills it eget off mus to ath contary! Ours is a small com- at the Bleecker Street Station of the Sixth learness trink is it a bracker and do not munity, W. hav fronds though, and they Avenue Elevated Reilrond, and you will edity intemperate. The ages of leath in are numerous. But probabilition is just now and on Third. Bloocker, Houston and cach class show an every as to how tashionable. Our friends, the few tempers. Prince streets, on either side of South Total abstances, 54.22 years. Labatuality one people, do not choos to trouble them. Fifth agenne, and on the agenue itself, people at a 2.13, a roless drukers, 52 of solves about the progress of the absurdities, or French follow of wine dealers, who will of prohibition, to which no long life is guar. furnish you wines from Bomono Burgun- 52 03. This makes to leves average sate of, because they exceed truth. The dy at \$5 per bottle to California wines at duration of life that at the test after and bulk of the nation, the nullions of moral the rate of tive bottels for \$1, bottles to be the highest that of the or have drinker, persons, who have a righteons, soler life, returned or exchanged. There is only one has average being hearly obven years and practice in deration, will see things in way, however, to be certain that your wines longer. The habited dranker have rages ed, is not a be soing. Those teach who the right light. But some in ans should be are old. Buy them by the pickage keg, about a year longer than the total abadopted to spread light. Our alies in first half-barrel, barrel or hogshead, the longer stainer. Another title prepared by the line for the diffusion of light on the subject, they lie in bottle the better they get. Buy committee, from which did doths and r of mutrition generally and on the real may your bottles. You have only one outlay on thirty were excluded, shows the tell oxing hely consider its slight inherent element ture and effect of our product, are the physicians head. Use a handful of bir behed in shuration of his - for a destance is, 57-31 espirit as the dang roas substance and in strains. We should approach them and in rinsing bottles. Buy a common wood habiterily temperate, to 48, excess drukway distinct from distinates, those teach hear their expressions. We should draw faucet for drawing. Here the prockage of 61 52 to drawkers 58 87 decided by no, when they have the good fortine to the mode of truth. Too little fixed bored on other on head or the other beat minimizers. 33.42 (coming lives under more of the hundred minimizers of soler is paid the medical profession in matters of fore it is sent home to you. Then when torty years the average age of death was ne consumers have his glass of wine, exceeding high public importance. They will not your bottles are clean, your corks ready. It tal abstances, n.2.74, in data ally temperatures. set suddenly to see things about smashed shrink from the tisk of promoting the phy. Staked in a can of clean cold water, a are 67.71 cares limbers of 40 free deletium tremens tollow incontinentia, sieal with being of communities. Men of slight (such will drive the toll to the drink resolution to the drink resolution)

Transmission $\pm 1/w \otimes_{k=k}^{n} + \cdots + \nu$ hate his and 1 1. When you are a second t = 0 If to of your winlabor. This samp the time of attended man Lis vin har real Physics wines we exertisted and from project a flars. The experior such as sometime gathering fixth has a labor of the mild a rein most direct, and established above the providing seems of Misseattler, " as the latter has read one read and interface has exist in a factor was read. Works with valuate wa't alvel a tellar his wines or bourbles until they have aring I at ear at all twill have been are also smild in teshnow their them by kinds of sing in his office out of these was whisky Novone with nit to my tri nit. the hot lk sper. These leaft her error the drinking of wine to your bining room Year bar trobe isn't going to suit r. People who take there waisky it can raines will not live off bosons, they have had a glass of wine at Linux.

DRINK AND DEATH Statistics White a mil Surprise the Probibitionists

A report on the majory into the estin ction of his is with habits of int maperson pripar the D. Issinbart Owen, pretory to the Ity sugaring Committee total abstances, hostitally temperate, free dankers, of his decolody intemperate

CULTIVATION OF THE VINE

The following paper upon the vine was read by Mr. J. G. Kelley before the meet ing of the South Australian Vigerous Asso ciation, held last menth at Adelaide

To any one first entering practically inte the cultivation of the vine the question of pruning is one of the many perplexing subjects he has to confront, and it is one inponwhich there is, and always has been, apparently an almost confused diverity of opinions, for not only do all writers upon this subject appear to have agreed to differ, but each individual cultivator has his own independent opinions, sometimes practically exemplified in his vineyard, but oftener kept in reserve for the bonofit of the unwily beginner in search of information, but when we consider the immense variety of the vine itself, the various conditions of soil and climate, and the different qualities of wine required, and know that all these have a direct influence upon, and have to be taken into account when considering the question of how to prune, is this diversity of opinions to be met with everywhere to be wondered at: Must it not rather be looked upon as a fact that must necessarily be and, to ascertain ext nt, likely to continue, although in a modified degree?

Although there are many directions and principles for our guidance in pruning, and and also systems that with modifications are applicable to all countries where the vine is grown, yet there never can be any hard and fast rules. Knowing this, it is both instructive and amusing when reading the works of some of the reputed authorities on these subjects, to note with what complacency they propound theories and lay down definite rules intended for the guidance of wine growers, no matter in what part of the world they may chance to be, blissfully ignoring the fact that what might be an infallible rule in certain districts would possibly prove altogether wrong and madmissible in other parts. What the primary objects of pruning are might be defined as, firstly, to promote the production of fruit, and secondly, to keep the vegetation within bounds and the effect of good and indicious prvning upon the vine might be defined as the production of the greatest quantity of sound finit, consistent with the age and strength, and and without diminishing the vigor of the vine, at the same time building it up or maintaining it in such a shape of form that will allow of the lost and most conomical working of the soil. By what means is the knowledge of how to practically regulate and stimulate the vine when proping it, so that it shall fulfil the above requirements to be arrived at: The time at my disposal this afternoon will not allow, nor is there any occasion to bring under notice the various systems and methods that are to be met with in the different wine-producing countries. It will be sufficient for our purpose to only mention those two systems which with modifications are not only the simplest, the most useful, and generally speaking the most in favor in all wine-producing countries, but also to be found in nearly all the vineyards in these colonies. I refer to the ordinary rod and sour pruning

In deciding the question of how to prune any given vine or vines, the following considerations must be taken into account, namely, the variety and nature of the vine

with regard to the variety and nature of the vine, take for example the following varieties, i.e., Matarot Grenache, Carigaan, Doradilla, Muscat, Pedro, Gousis, and so on. They have a sort of independent, stiff and erect growth, with short joints, and produce abundant crops on the buds situated at the foot of the shoots, and require spur pruning. On the other hand, varieties such as the Shiraz, Carbenet, Reisling, Sauvignon, Zante, and Cape currants have a drooping appearance and long straggling shoots, and are long jointed, and though they will produce small quantitres of fruit when spur pruned, should always be pruned with rods and trellised or staked if they are grown with a view to satisfactory crops. In the second place, as regards the quality of the vine, it is well known that the height of the vine above the ground has a great influence on the quality of the grape, those growing close to the ground producing more sugar and less bounged and flavor than those growing higher. As a general thing for vines growing on tich heavy lands it is found advisable to love the vine standing from 18 to 30 meles high, and for hillsides and dry situations the height varies from 9 to 15 inches. With regard to the influence of climate, sitalion and soil, these have to be taken into ousideration in the question of the height if the vine and its size and shape. It is surprising to find how little attention is paid to these infla nees by some vinerons. It is not at all an unusual thing to find in some vineyards the vines growing upon rich strong ground ent downward and kept back to the same size as those growing on higher and drier situations, and those in their turn growing too large and being over-

Lastly, it is, judging by the age and condition of the vine itself, that we know what number of spurs or how many rods to leave. You cannot turn a man into a vineyard with instructions to prune all the vines to four spurs, or to leave two spurs and two rods on others. From the very first pruning up to the time that the vine has attained its intended size and shape it is absolutely necessary that the pruner should have the form or shape that the yme is eventually to have consistently in his mind, so that he may encourage the growth of certain shoots and avoid leaving others growing in directions that would eventually spoil the shape of the vine and and necessitate the use of the saw in after years. The less a vine is mutilated by the use of this instrument-namely, the sawthe better for its future well-being and health. At the same time, in the case of vines growing upon rich soils, it is often necessary during the first years to leave extra wood in order to utilize the superabundant vigor of the vine, but this wood it suppressed as sood as a sufficient number or spurs can be found on the permanent branches. In deciding as to what number of spurs or rods, as the case may be, a vine is capable of sustaining the pruner is guided by the general appearance of the vine. He knows that a superabundance of strong, vigorous shoots is a sign that the vine has been too sharply pruned, and consequently robbing the proprietor by running to wood, and not producing the quannew of fruit it should.

If, on the other hand, the vine has a stunted appearance, he will conclude that it is overtaxed. In a vineyard that has itself, the qualities aimed at in the wines, the situation, climate and soil the age and condition of the vire. In the first place, judicious manner, the different varieties of soils to be met with everywhere make it im-

vines will in themselves have a tolerably possible to find any one method suitable for regular appearance, both as regards size and shape, and the vines will not have the numerous large sores or sears caused by the use of the saw that are too often to be seen in some vineyards. The question of size and shape is, to a certain extent, dependent upon the distance at which the vines are from one another. If the vines are planted close together in the rows, it is advisable to give the vines the form of a fan or oval shaped. This also applies to trellised vines; but if the vines are planted so as to allow for crossworking with ploughs or scarifiers, the best shape is that which is known as the goblet shape. The simplicity of this form, and its general adaptability to the many requirements of the vine, and especially to those varieties requiring short or spur pruning, made it a general favorite in all wine-producing countries.

In the case of rod-pruning, some support

must be found for these rods; and the most economical manner of doing so is by means of wire trellising. One wire is generally sufficient for this purpose, and in the casof very low vines should be kept about six inches above the stock; but where the vinethemselves stand a foot or more above the ground the wire need only be just abovthem, because the rods which vary in length from two to three feet should be kept in a horizontal position, and where the vines are high enough to all it is even prefereble to have the rods bent in the form of a half-circle, the end dipping towards the ground. Most of the older vineyards in this colony were laid out upon the same principles as those in Europe, but experience has taught us that these systems are neither suitable to our climate nor labor market, for in the first place the vines were not allowed sufficient ground space from which to obtain moisture for their sustenance during our long and dry summer, and in the second place too much manual labor was required for the working of the soil. In these colonies, where land is cheap and labor scarce, it is very neces sary when laying out young vineyards to do so in such a manner as to allow for the efficient and economical working of the soil by means of ploughing, harrowing and scarifying. If the vines are planted at right angles and at sufficient distances apart, the land can be worked in two or more directions with the scarifier, etc. thereby diminishing the surface that has to he cleaned by manual labyr. In the case of vineyards the effect of good and efficient working of the soil upon the quantity and quality of the crop is, or ought to be, well known to all. No arguments ought to be required to prove that the vine will pay for all the extra labor that is judiciously spent in keeping the ground free from weeds and in good tilth. Examples of this are to be found in nearly every district, and one has only to go into a vineyard that has been well cultivated and take a general view of the crop before it is gathered, and then pass on to one that has been partially or wholly neglected as regards the working of the soil, and the first glauce will be sufficient to show him the effect of neglect in this particular upon the crop,

Starting, then, with the fact that the viue will pay for good cultivation, the next question is, What is good cultivation? As m the case of pruning, these are many theories upon the subject; and although a general ontline of the principles of cultivation

general application. Let a vigueron once become convinced that the vine will pay for thorough cultivation, and he will soon find the best and most suitable means to accomplish that eod. It is said that the fruitfulness of the vine and other trees depends upon the fine fibrous roots growing near the surface of the ground, and that, as in the case of nature, where the ground is not disturbed, they are to be found just below the surface of the ground, and that by cultivating the ground deeply these roots are destroyed, and the fruit-producing capabilities of the vine thereby reduced. If this is so, it follows that where vines are growing in rich, damp soils, shallow cultivation should be observed; but on highlying and dry soils if these roots were encouraged to grow too near the surface, there would be a probability of losing the crops through the drying of the soil in summer, which would render these roots useless to the vine, so that even supposing he roots nearest to the surface were most iseful to the vine, tolerably deep cultivaion would be advisable-say, from four lo ive inches. With regard to land of a varm, rich nature, where weeds start with he first winter rains and grow very rank, t is a good plan to scarify, or, hetter still, o run a cultivator over the ground so as to onry and destroy the weeds. By doing this, me ploughing later on will be sufficient; whereas, if the weeds are allowed to grow unchecked, two ploughings will probably he necessary. The usual routine of vinevard cultivation is, first-to plough the ground during the months of July and August. The effect of this ploughing is k bury the weeds and turn down the surface soil, so that the surface roots may get the benefit of that which the ground has gained from the action of the sun, air and rain and leaves it loose and free for the afte cultivation. The next process is to scarify across the vineyard, so as to cut out the strips that are untouched by the plough The spaces round the vine where the plough and scarifier cannot reach are hoed out o

All these operations ought to be com pleted by the end of October, and in som situations earlier; but it is not to be sup posed that this is all that is necessary. I the case of light, sandy soils, perhaps light harrowing or scarifying during No vember or December will be all that i necessary to render the surface of th ground perfectly free and pulverized, but it the majority of cases the laud will requir stirring up several times during the fire summer months. This summer, cultivation has for its object not only the destroyin of the weeds, of which there may, perhaps be very few, but also-and this is its mor important function—the formation of l loose, free, pulverized layer of earth, which will act as a sort of blanket and check of prevent the evaporation of the moistu from the underlying ground. It also r ceives and absorbs the sun's rays, keepin the underground cool.

C. A. WETMORE began picking Caberni grapes in his Livermore vineyard, las week. They run 23 per cent, in suga From one Cahernet Sauvignou vine trains on the Chaintre system, 205 bunches wer taken, weighing 32 pounds. The exper ence of growers in this valley during'th past hot spell, shows that the Cabern withstands the heat better than any oth

CASES FOR WINES

The following is a copy of a letter received by Messra Harold Brothers of Adelaide, S. A., from a leading firm of coopers been some correspondence in your colonial papers with regard to the respective ments of new and secondhand casks, and that the use of the latter in preference to the former, for the shipment of colonial wines, has been advocated, on account of the coloring and flavoring matter (re tannic seid) existing in the oak from which the new casks are made. How is it rossible for any person, having the interest of Australian winegrowers at heart, and hav ing a thorough practical knowledge of the anbiect, to advocate the use of secondhand or remade easks in preference to new, we are quite at a loss to imagine We should very strongly advise all column: winegrowers to make careful inquiry into the system pursued by continental wine shippers before accepting such advice If they do so it will be found that althe large growers of wines, possessing any character, not only use only new casks but are very careful before putting their wine therein to extract all the tannic acid therefrom.

"It will be found also that next to the manufacture of the wine itself the greatest possible care is bestowed upon the preparation of the casks before they are used. It certainly does seem the height of absurdity, after using the utmost care and precantion to produce the best possible results in the manufacture of the wine, that the grower should, possibly for the sake of saving a few shillings per eask, or otherwise for the want of a proper share of attention to what is, perhaps, considered a mere matter of detail, deliberately throw away all the time, care and expense, to say nothing of profit, by using vessels which are more or less sure. injuriously, to affect his wine, and, worst of all, probably destroy the potentialities within grasp of the Australian winegrower by securing for the wine the unfortunate reputation of never at one time being alike in character, palate, aroma or any other respect, and frequently being undrinkable There can be no doubt that Australian wine has a great future before it if growers will only use every possible means to ensure that their various distinctive growths every respect as possible. This desiders. tum will never be attained by using secondhand basks which are thoroughly imprognated with the distinctive character of be it wine, spirit or beer, and it being utterly impossible by any or whatever process to entirely eliminate from them every tent, a taint of the original contents, to the atter destruction of any consistency of character in any one shipment, while have happened to use

"A further grave objection to the use of be. And there is little doubt that this de- nac. Some use sait with the first charge, who use graps mus, as a daily drink, with substance that should not

in London: "We understand that there has casks you have an absolutely virgin wood, possessing all its original life and vigor and a flavor and aroma of its own, untainted by anything foreign to its nature. The only objectionable feature therein existing being the tannic acid. This being properly extracted by a poorss applied exactly alikin very respect to each cask, you will have a vessel which will carry your wine for any tength of time without imparting the slightest taint of any kind. Where new casks have been used, and the wine has been murrous'v affected, the grower has not taken sufficient care in preparing his casks before using, and the fault rests with him entirely and not with the casks. As we have said before, continental wine growits season then now easks satisfactorily, and distribute also season new casks, so that wen gin, than which there is no liquot more susceptible to flavoring or color, and it colored to the slightest possible extent is commercially smoilt, is not affected in any way. Brown here in England also, es pecially those who ship pale ale, give the greatest possible attention to this matter, using for shipment new casks only, and weing that they are properly seasoned betore being filled. Now if, to say nothing turther of brewers and distillers, continental wine-growers can, and do, surmount the difficulty of using now casks, and find that to do so answers their purpose best, why do not Australians follow in their footsteps They have experience, and experiently deast, In this matter we do not ask growers to accept our version as the correct one, but would most strongly advise them to enquire carefully into the matter, and neither ac cent our dictum nor that of others. At the same time we do most strenuously assert that new casks properly seasoned or pickled, may be used for the most delicate wines without the slightest fear of any ininry thereto, and we can further assert that new casks are infinitely preferable, from every point of view, to second-hand casks for the shipment or otherwise of wines; and that beyond a certain point the question of cost to a grower should be quite a secondary consideration to that of wines, buying the lowest priced article he shall always arrive here as near alike in can get being the very greatest of false ning through pip's over icc. economy

"Now, in regard to the best mode of seasoning or pickling casks, there are so many different ideas on the subject, and whatever liquor they originally contained, the possessors of the various ideas each is very difficult to lay down any rule, trace thereof, the result is your wines their distinctive and peculiar characterthirds full and bitting it remain in for a different shipments vary in accordance certain period, varying, according to the with the casks which the shipper may reperators adea, from four to twelve hours,

feet, which is very common in a cond-hand others decesols afterwards repeating the the most beneficial results, and we know casks, and cannot by any manner of means operation as above, but while either, one of many who would in yillo too gial to be guarded against, is largely responsible I doubtedly historistic operation, whether buy if they are a where it and be hed. for the condition in which many shipments, it is best in other respects we give no A sertion will-known be so leady for of wine have arrived here. Now, in new opinion. We strongly olving powers to veers hope assymmetric due to be set of the dispersion has ascertain for themselves which part while ten days lines and gray thist method of the application of the general and a kep itting up a lightly last her until principles laid down sints their own vints next fact. But a book with it bearder ages the best, taking care, that di-the describe home consociption of covered the process which cuts his wine factor of graphy and world inholotedly best, have all the various details most respectively. Which is a larger than the compensation of the compen tion of casks. Australian wine, shipped other States for the most reunder these conditions, will be even the Constanted who, for religious terms or physical remtime, but shipped in improper casks will, whotesome with courts a sixth pure promises to be a gigantic trade with the findrinks. In monatorius of grape mother country

GRAPE JUICE AS A DRINK.

The question of what we shall do with the family table, for drinks between meds in thaffer for the expensive wines for the thirsty farmhand, there exists no more refreshing nor any wholesomer drink than the freshly squeezed crice of our grapes. The drink has been much more brought the grape pure into favor not alone as a drink to allay the thirst, but is Europe there are at least twenty places? famous for the sanitarium with grape! onres. Most of them are situated in north of Europe disk to them during) September to be l'enclitted by the curative power of the grape. The grapes are j getting the most suitable casks for his picked, crushed and heated every morning, and immediately cooled iff by run-According to prescription, the patients drink from one to five glasses every day, nearly always with the most beneficial effects. The diseases cured by the grape curthink their own method the best, that it pure blood, and many more. No place is a arrive possessing to a greater or less expliction, and the casks need to be seasoned meantime here ver, we could use the alone for nome use, but for that and exelling him her post. The entry us of any of our towns can hardly afford to buy grapes at see on Up int units formshing this natural dice or third hand and press the pure and in grape by the are that her drunk it borner a null be very left rent along the stellar as proshifting the casks about from time to time | drink it but it would be very lifterent shifting the casks about from time to time drink it but it would be very life sent on 1 vs. from the various so that it was it lays on the house to keep the higher with the second erap, which ere would be from it with the second erap. objection to the use of second-hand casks, lively and ensure its reaching every porting to waste. The vineyardist number is real place, in the fact that it is interly impossible of the cask. After remaining in as long the proper one to extend the group in the fact that it is interly impossible of the cask. After remaining in as long the proper one to extend the group is a form when the group is a form when the group is a form when the group is a form that it is not a form the second that it is interly impossible of the cask. After remaining in as long the proper one to extend the group is a form when the group is a form the second that it is not because the group is a form the group in the group in the group in the group is a form the group in the group in the group is a form the group in the group in the group in the group in the group is a form the group in or another. This defect can be early remained again until such time as the liquor) wife to be about part up s verso nationed other not the local total rearing, but cothing can prevent the wine with cold liquor to harden off, and after same at good provide to the to vine domain of the form taking it up, however slight it may standing some time should be ready for 1 now known of more form to the contract of the contract from taking it up, however slight it may standing some time should be ready for 1 now know of may from its in town account in to assits assigned positions,

make a series of careful experiments, and been approperly introduced only after expert trade of tails of the various experimental operations in inconsider all a relations and work it are carefully noted, and once having discorp, and an established in the manuligiously carried out in all future propagation in a State for a mark to cold is any of the tinentacs for and away behind in course of sons, it to wise, however light or be the means of nipping in the bull what antermented graph are as the very best julie on a small soil is easy on eigh Crush the grapes because the time mines distrily after the heavy matter has settled bedth and sik while his sit will keep like other passary see I've export it would that part of our second rop of Muscat be desirable to here the grape pure clear. grapes which will not have time to dry, says. The grape rine should first be allowed to the Kere Constyres a common is of imported stand twenty term home in strengty-sulance to all our raisins non, large or small, planted asks, so as to a low a sediment to especially the latter. We believe that we sattle then be held and bette liber. The could not possibly turn it to any better of same apparatus that is used for hesting more profitable use than to make it into wine outd be used to alvantage. Grape grape price. Comparitively few people price treat this was will be buildingtor know what a delicious drink grape pines is, clear and only says to a right to be pleasant especially the pulse from Mus of grapes. Fifty million giff us on the sold every The second crop of Muscuts is, for this years the Eastern Sec. It would not purpose, much superior to the first, as it run opposition to the way it is would becontains more acid and bas sugar. For come the dank of every family who could

NATIONAL TEMPERANCE WINE

There are few subjects to which there adappreciated in Europe than in America, there so many write impress, is, crude and though even here the last few years have an ten the ideas says 1) S. Marvin in Proposition to the war postion. Lit the average cuitater in temperance a frink with go it in time powers. In principles borned it in the principles and they have here is heard of it, and perhars will not be now there is such a thing when mere enty all generals and stailed wine Switz-rland, and people from all the sandtractings, in edinak but especially the natural automounts load of the grape mist is nature gives at forth. He Litter is a little to be lifficult to keep fresh than is the fermented j ite j, but in their science and the resources of the editorry dipartment of every well-ordered kitch is are ample for the purpose. As that is need I are the processes upor lain treet aiming and this same natural temperator wine, the are that of all bever ges over is 1 by man dyspepsia, liver and kidney troubles, time; ones out pare indiresh, est is you open a can of peaches or tomates. In canbetter adapted to the establishment of a ming, the natural jury of the grape may be more especially as different wines possess grape cure than Fresho, and no doubt in firectly used, or a may be based lown by time one will be established here. In the process legre of heat, only then didnted istics, and the casks need to be seasoned meantine, however, we could use the when pend. For sok people for accordingly. Many use nothing but boil-grape most to advantage conselves, not in the fragely out to a sorts and nog liquor, charging the casks about two militias, dos a la casa comshing A soft rive sees the i temp rates pople.

a crimtal than constitutions the same with the cays

AUSTRALIAN WINE GROWING

Everything tended to make the paper upon wim-growing which Mr. Castella read before the Reval Colonial Institute at its last meeting, a success, except that the discussion was very limited. In the room itself there was plenty of material there being representatives present of all the colonial wine firms, but whether or not from the feeling that Lord Carmivon's speech overshadowed them, they would not lise to speak even at the ladding of the Chairman,

5 Mr. Castella began has pap r by declaring his enthusiastic ladief in the future of the Australian wine trade, a belief strengthened, as he said, by what he has seen and tasted on the Continent. As a further preface to his subsequent remarks M1. Castella gave the acroage with each colony has under culture, and the quantity of wine which is produced. Sout Au-tralia in this computation stands third on the list with 4,500 acres and 473,535 gidlons, but M1. Castella explained that the latest returns that he could got for South Australin were those of 1884, the colony thus stood at considerable disadvantage compared with Victoria and New South Wales, whose returns were as late as 1886. Mr. Castella then went on to say, notwithstanding the totality of 22,905 acres which were under cultivation, that compared with their immense territories, the aggregate production of our colonies is very small, yet it is sufficient to Trove that they can grow good wines; and that their taking a position amongst the wine suppliers of the world, especially as suppliers of their own people -the people of England-only depends upon the prudent management of their great natural advantages. The early history of wine-growing in Australia was then reviewed, with its varying success, until the awards of the Exhibitions in Paris, Vienna and London proclaimed the quality of some of the colonial wines

In the earlier days, remarked Mr. Cus tella, alcohol, the great concealer of defects, was extensively resorted to. Almost from the first, the use of 50 gallon stills being allowed, without supervision, to those possessed of five nercs of vines, this in colomb's where the duty on spirits was at times 12s, per gallon. South Australia received special attention in this connection. There, said the paper, a vine-grower could in those days buy spirit 60° overproof, duty free in bond, German spirit, worth only half a gallon, mix, free of duty. such spuit with his own wine under the supervision or a Custom efficer, until las so-called wine contained 35 per cent. of alcohol, and, after such addition, take back such a mixture to be sold as colonial preduce. Mr. Castella then proceeded to descant on several points of importance connected with the growth of wine, and selected as the most necessary for success the careful selection of selection of the variety of the grape vine-"it is the one which it is most necessary for the vigneron to be conversant with, since its choice may medify the influences of the climate and soil, over which, once established on a given spet, he has no central. Planted alongside of cach other, and their fruit gathered in a similar state of maturity, two different kinds of grapes may give, one : wine of 18° of alcoholic strength, the other a wine of 25°." It is therefore absolutely essential to all success that vignerous should have a practical knowledg of the

yield that class of wine. The next great point in Mr. Castella's opinion is to have a clear conception of the class of wine which it is best for them to produce. Upon this, Mr. Castella has come to the conclusion that London being the deboucke for the colories, an examination of the class of wines chiefly consumed there will give a fair estimate of what ought to be cultivated. The paper emphatically states that, "Half the consumption of England is now composed of light wines," and this is amply supported by statistics. Further, in regard to the choice of grape vines there occurs in this portion of the paper the following remonstrances: - It is quite a mistaken notion to believe that time must reduce to the same type, in the same locality, a producduction from different cessages.

In Burgundy, for example, the Pinot is the basis of all the fine wines, the Gamay, a heavy-bearing graps, that of all the common ones. Both kinds have been cultivated alongside of each other for ages without being assimilated the wine made from the one remaining worth three times more than that made from the other. But upon the matter of the choice of grapes, it is urged that Australia is specially fortunate, as the founders of her wine industry were men who imported their plants from the districts of Europe producing the best

There is such an abundance of good advice and kind remonstrances that I have great difficulty in making selections. I must not pass over at any rate the judicious connsel which Mr. Castella gives about the gathering of grapes. But for the common error, he says, in warm districts of gathering the vintages when too ripe, Australians would not have been so long in establishing the reputation of their wines as high-class vins de table; the red resembling closely, as they do, when judiciously made, the Cote-Roties of Hermitage and the Cortons of Burgundy. the white, the red, and fragrant Steinberg of the Rhine. The following general rule may be gathered from Mr. Castella's further observations upon the gathering of grapes for a vintage:

In cool countries they should be gathered as late as possible, in warm countries as early as practicable. Mr. Castella further nointedly asks who drinks sweet wines, and thinks it a deplorable error to offer prizes for sweet wines for competition to a community of hard working usen, who are unable to judge by themselves of the present consumption in the far-away world. He exclaimed again upon another viticultural matter that it is the greatest service to proclaim that wine may be kept within 26° of alcohol or at bast within 28°, as the extreme limit in natural wines.

The paper then proceeds to point out that owing to the phylloxera and other disasprous conditions on the Continent that Australia has a glorious chance, but Australia "must not lotter. A few more years will perhaps see abundance restored to France. and poisonous alcohol curtailed in its evolutions." The last report on the 1887 crop of wine in France which runs thus, leaves plenty of room for improvement:-The quality of vines of 1587 seem to be a little superior to that of the wines of the previous vintage, but their alcoholic richness remains weak. Viticulture is more and more compelled to result to the use of sugar to ameliorate the quality of its prod ucts and to augment them. At the end of

climate of their respective provinces, will for additions to musts of wines and ciders amounted to 36 millions of killogrammes. It has been calculated, I believe, that each acre of France under vine culture demands now 14 ths, of sugar to keep the atcoholic strength of the wine up. Not only too has the quality of the wine fallen off, but the quantity too, the last French vintage being 535 millions of gallons as compared to an average of 1 235 millions of gallons between 1873 and 1878. Circumstances such as these pathetically remarks Mr. Castella, are the opportunities of our colonies, ' but we must take advantage of them at once, for it will not be long before they mend." The paper then went on to support the suggestion of appointing a Gov-rument specialist upon wine growing, which would be invaluable to the wine growers throughout the colony. Such a man should travel, according to Mr Castella, over Spain, Portugal and Greece, come back through Hungary and the Rhine, and after becoming conversant with the ensemble of the production, pass three months in England, studying the present supplies from the colonica, and ascertain through the leading clubs and good society the exigenoies of success. A specialist, if appointed, would have plenty to do if he did his duty, for millions of acres in Australia may be made to produce wines of such quality as to command a high commercial value, but it is particularly in the in the coast districts that the delicate ones which establish reputations for whole provinces can be grown,

> The paper then goes on to relate some incidents of early competitions in the colonies, when, for instance, a Victorian sample was adjudged better than a Chateau Lafite. This decision demonstrated to us wine growers, says Mr. Castella, that the variety of the grape plant-le cessage-produces under similar conditions of climate and soil, the same wine in every country.

Mr. Castella observes that he has enjoyed at various times the wonder of wine merchants of erus famous in France, at the similarity of our products to their own, Many such statements are made, very encouraging to the vigneron. Attention is also drawn to the advice of the viticulturist whose services have been secured by the Government of the Unpe Colony, that wines of light color should be cultivated, of little spirit and much bouquet, as well as fine vines, particularly that of the Syra of the Hermitage, for the Cape Colony and the southern parts of the Australian Continent are in the same latitude and possess similar climes. May we not hope, says Mr. Castells toward the end of his paper, that federacion will impress upon Australian industry the same impetus which is given to a chariot when, freed from jibbing and rearino steed, a team of good herses rush together into their collars. Wine growing would particularly benefit by it. For instance, if the colonies had been as one concerning the wine exhibit at the Indian and Colonial Exhition, if there had been a single head of the Australian wine department. from whom all information could have been obtained, instead of its having to be sought for in all directions, no slight inconvenience and disappointment might have been avert-

Mr. Castella, too, calculates that the financial profit upon Australian wines sold in London proves that Australia can now take her share in the wine trade of Europe. "In conclusion," says Mr. Castella, "let the Anstralian motto always be, 'Quality alone, and quality forever.' Thus may we hope varieties of grapes, and which, under the last October the quantity of sugar declared to establish a foremost reputation in the

markets, not only of the mother country, but of the wide world " The Earl of Carnarvon, who opened the discussion declared that he was surprised at the high quality of many of the wines which he had tasted, when on his recent trip to Australia, but forebore from following the reader of the discussion of their particular ments. Mr, Collyors Levey followed Lord Carnaryon by some personal tributes to the merits of Mr. Castella, regretting and declaring amid much bughter that it was a decided want of patriotism upon the part of the Australians not to drink more of their own wine. Sir Frederick Young who was in the chair, called upon Mr. Burgoyne to speak, but notwithstanding loud calls from the audience, that well-known wine merehant steadfastly kert his seat, and Sir Charles Mills then arose, regretting the scant notice which the Capa Colony had received at the hands of the reader of the paper; and then referred to the spirited action of the Cape Government in establishing viticultural farms and specialists but he could not agree with Mr. Castella that there sould be one expert for all the colonies, Sir Charles thinking that each wine-growing colony should have ita own man. He gave expression to his belief that it was a great mistake that the Indian and Colonial Exhibition had not been extended into the jubilee year. Mr. Moncrieff Paull followed with the declaration that it was on account of the want of Intercolonial free trade that more colonial wine was not drunk in the colonies themselves; he said, for instance. South Australia would send to Victoria only a duty barred the way. Regret was also expressed that a more carefully manufactured wine was not sent home to Eugland. As no more speakers were forthcoming upon this important subject, the Chairman summed up the discussion, calling to mind that upon June 20, 1876, the Royal Colonial Institute had had a previous paper upon colonial wines, and that he himself had occupied the chair,

HOW TO EAT GRAPES.

No! the man who holds the grape between his thumb and dexter finger and squeezes or shoots the pulp into his throat, does not know how to cojey the fruit, and is not likely to appreciate the good qualities of a fine grape. Let the berries follow each other into the mouth in rapid succession until three or four are taken, while with each insertion the teeth are brought together upon the seeds without breaking them. The acid of the pulp is thus freed to mingle with the saccharine inice next the skin, and a slight manipulation by the toogue separates the seeds and skins from the delicious winey junces; after this has tickled the palate, skins and seeds may be ejected together. Close to the skin lies a large part of the good flavor of the grape.

San Francisco, September 1, 1888.

The Bradstreet Mercantile Agency reports sixty-seven failures in the Pacific Coast States and Territories for the month of August, with assets \$109,980 and liabilities \$185,000, and sixty-nine for the corresponding month of 1887, with assets \$296,026, and liabilities \$2,359,643.

The failures for the past mouth are divided among the States and Territories as follows.

STATE.	50.	ASSETS.	LIABILTIES.
'alifornia	53	\$82,170	\$198,505
)reg-n	5	8 450	8,40
Washington Ter	. 4	14,200	23 000
Arizona	. 5	5,250	11,350
	ω	0100 000	5051 OAE

GROWING THE OLIVE

A correspondent of the Roral Press says. I wrote you some true ago an article describing my plan of brush mu ching for for grapevines. I have this year tried the same method on olive trees that wire planted March 1st, and have had good succoss. I have so far saved about "5 p r cent, notwithstanding the fact that they were planted on newly clear d bard which was covered with the thickest kind if his parral on the first day of the year. The ground being rough and full of roots iff or cultivation was quite impossible. I did the b st I could, however, and continued outs viction lab in the sensett.

I find one great fault with beginners and that is that they step cultivating tosoon in the season, and the long dienel proves too trying upon trees and vin some get well roofed. My olive trees were very small when set out and will not make nouch growth this year, but they have such a viorons is ok that I have no do the about their fitting thrift unless check of by some | x + j trop dly cold snap-

A large number of ohy trees wer planted in this county list spring and a reports by correct, most of the plant re have less quite informate in Josin... heavily during the spring. It may have been from eards a handling, or the losmay be caused by climatic charges being too sev re for delicate plants

The past season was extremely unfavor reble for tree and vine planting, being oddand dry during the early spring, feller di by a hot April. Luckily May, Jane and July proved quite cool, or the result would have been disastrons to all planters. Whatever may have been the cause, the truth is evident that our tree and vine planters lost heavily. One gentlemen put out 2 000 young olive trees and had lost 1500 of them early in the season, while another neighbor lost 60 per cent of his olive plants which were the very best kind obtainable in the market. The last-named party irrigated his trees with his trees with the resuit as mentioned I am only an amateur in this line of business, but I have taken especial care of my trees and vines and have been quite successful. I give close attention to putting my trees in the ground. in the proper shape and also cultivate with continued exertion

I may as well mention that some of our losses may be attributed to the careless manner in which nurserymen handle the stock sent to country customers. The trees look as though they were dug up and allowed to be in the wind and sanshine byfore being packed until the sap was dried np. Peach trees are easily effected and many are received which are quite o-youd any hope of resurrection. The farmer who planted the larger lot of olive trees spoken of received the trees during the winter's coldest weather. They wire packed with balls of moist clay around the roots, which is an excellent plan usually, but in this case the extra care was runnous, for the moist earth, perhaps, to came froz n, which would doubtless cause the death of any evergreen tree or shrub. Again, the plant ing was done in a slipshod manner and no proper care taken to place moist earth nearest to young roots. It is, then, a wonder that heavy loss soccurred?

I have found it best to have roomy and deep holes dug, and whom the tree is had covered with earth give it a bucket of water, after which place the drier carth on !

top and your tree will most likely pull | Boot, little tree the trying orded of transplanting.

Loss off red in market are grown under ordist in our climite. glass in hot horses and an so tender and case pathle that when exposed to the frosty rights of March they are apt to be out lown and thus lose the benefit of an early start. Some of rune wir thus out down. but por forth frish shoots near the ground conserptions might be grown in the genor, I would think, and thus become hardnot enough to withstand ordinary fort all frosts and would be much proferred by hose turning their attention to obsergress un. It is an in lustry only yet in infancy and we have thousands of acres of land throughout the State asysting the coming f the patient planter to make our land. is with a str am of the richest oil found in the globe. The olive is one of the comog fruits, and the planter who succeeds incurring a greek of these wealth-giving ers sentes an means better than that of for vorament bonds. Plant the olive and count gave your collage the means of rebased."

he lift r t och r, known as exp rience. the trees, many siem to adopt the motto of \$67,200 000) a year

signance may be the price of liberty, so One more item about olive plants is the lalso that and ceaseless toil is the price denaturer of their propagation. Many of manded to insure the success of the stell-

A CO-OPERATIVE WINE CO

The Larkmes I C operative Win. Company has been formed to tru sect business for a size in my object to a dyspoptic at Larkmead, a station about four nales. above St. Helena. Fellowing are the homes composing the company. I. t. Farmer, W. F. Burke, Mrs. A. C. Furnass, of Larkmead. will make up their crops and conduct the five on an areas in a line 1 business ontirely monothe co-operative system. We hope to see the plan succeed and as have no doubt but that it will Other ment of our system him a shall a best be-- rs should adopt a similar plan

THE MINISTER of Agriculture has been beking a sensus of the fewls of France and he informs as that the country contons r ment and confort, and these who will 45,000,000 hens, worth, on an average, 5 me after yearwill resoup and call you conts a proce. One-fifth of those hous and 2 non-none resters are killed annually, and But troo and van planters must bearn by they sell for \$5,000 000 in the market. The other 3a out 000 to us lay about 3 proceed, that murely slinging in the ground their eggs every year worth 1 1 5 cents aprece; ties or vives will not end their labors, this sum nots up not less than \$36,740,000 then the work just begins. After planting. Therefore the chickens of France produce

GRAPES SHOLLD BE FATEN

Farmers well understand, says the Wichupra Hastie at all lies of they keep then horses on two concentrated, but that their stemachs get out of order and they have to be turned out to greek to give them t chance to recuperate. The number inimal suffers as noted to a to visit in f Nacustomy sombine the at its solar are stem from to stong to is a fruit and so the tan the eyel has constantly minted or the total the the adiry for the W. L. Philips and Mr. Stole, of Calistog: out-1 overing of a times grains and This is the company we spoke of some time age. The cellur of Mrs. Furs. poyed in the latter 1 States, remnering hiss has been beased and those interested gold (note one teeth) in an vill some an trated and round its of

 $\mathbf{A}_{\mathbf{x}}$ from is tage a undicated as a require-, eaten to fi 'the demant I It has been demestrated by choiceal analysis that a large part of the land within that is found in the skin sort of fruits, grains and roots This brings has to the test of a good grape No grape should be used-rod good unless it in beset is perposeds on I skins, with added relished to be grand to see France the patients are reported to dethe pulp-skins and seeds to get the full benefit of the Letens treatment. As the in-briate ourse, ad once at most rid highful where they can be in be the attargety of fruit the fruit over the gent desire and distroying the taste to a signer

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FRIDAY.... SEPTEMBER 14, 1888

THAT OLIVE culture has taken hold in California may be readily judged from the constant reference made to the plantation of new archards in the press of the interior counties, and the general interest displayed in everything which pretains to the industry. On the whole, the results for the year have been satisfactory, although, of course, disappointments are heard of in some quarters, owing to inexperience on the part of the planter. Much difference of opinion exists at present on many points in regard to the varieties adapted to our climate and the localities suitable for their cultivation. One of the best proofs that those who have gone into the business are not discouraged by the adverse opinions expressed in some quarters is the constant increase which is going on annually in the acreage of plantations throughout the State. The following instance, worded by the Auburn Republican, is a fair sample of what is going on else-

William Shillingsburg now has fifty acres of olive trees on his ranch at Gold Hill. planted 108 trees to the acre. He has planted ten acres this year, and will add largely to his orchard uext spring. His oldest trees were three years old last spring and have trunks which average two inches in diameter. Mr. Shillingsburg does not irrigate at all, but depends wholly upon cultivation, and he is meeting with the most satisfactory results. Last spring, for example, he finished pruning the trees by the 1st of February, and they were pruned so that the lowest limbs are four feet from the ground. By the 1st of April these trees had made such a growth that he was compelled to prime the whole orchard again. This is a good showing for cultivation. Mr. Shillingsburg thinks that most of our olive growers do no prune high enough from the ground, and four feet is his rule, so that a cultivator may run close to the trees.

THE GRAPE growers of Sacramento, representing over 2000 tons, bave appointed a committee, to negotiate with wineries. If our prices be not obtainable, the ensimilar agreement.

The special committee of Grape Growers' and Wine Makers' Union have rendered au interesting report as the result of their investigations into the condition of business, It says: We believe a liberal estimate would amount to 17,000,000 gallous, of this, 12,-000,000 will be made in the Coast counties: of the remainder from the interior, a large part is annually converted into brandy and sweet wines. Altogether, over 4,000,000 gallons of wine will be distilled, leaving inthe neighborhood of 13,000,000 gallous to be offered for sale during the coming year. We find the consumption of wine on this Coast to be about 5,500,000 gallous, and the exports 7,500,000. Thus, it may be seen, that there is no present overproduction. We estimate the total amount of '86 and '87 wine in the makers' hands at 4,000, 000 gallous- only about one-third of which is for sale. With these facts in mind, we caution our wine makers against a sacrifice of sound marketable wines, believing that prices unust soon be better.

This will make the total output less than in 1886, but a little more than in 1887.

The committee further recommends, as a remedy for low prices, the suppression of all inferior grapes and wines, and advises the drying of all grapes of the Mission and Malvoisie varieties

The annual report of the Viticultural Commission, which has just been issued, contains a vast amount of information valnable to the vine-grower in relation to planting, and destroying insects. The reports of the Commissioners from the different districts show the that grape-culture has been steadily on the increase. J. H. Wheeler, Chief Executive Officer, says he finds the greater part of wine to be produced in the bay counties of Napa, Souoma, Santa Clara, Alameda, Los Angeles and Fresno, while Yuba, Tehama and Shasta counties have proved to be raisin counties. Solano, Sacramento, Placer and other foothill counties are producing the bulk of the grapes designed for Eastern markets. The local markets are well supplied by Solano, Sonoma and Santa Cruz counties, the latter being pre-eminently suited for the production of the late table

Owing to the length of time required in bringing forward an olive orchard into a stage of profitable bearing, the desirability of obtaining trees of certain growth is obvious to all intending to enter the business. An opportunity is now offered by W. A. Hayne, Jr., of Santa Barbara, whose advertisement will be found in another column, to purchase an extensive planta tion of this valuable tree. The offer is one which is not met with every day in the year, and is worthy of attention by those interested in the future of the olive in Califor-

THE LATEST reports received from the interior by the Secretary of the State Viticultural Commission are as follows:

lu the Livermore valley the weather is very dry and warm, but the fermentation is progressing favorably.

In Santa Clara and Sonoma districts, picking the crop has hardly commenced, but in the latter district the Reisling has been fermented with much success.

THE WESTINGHOUSE Electric Company tire product will be dried. In Livermore has recently perfected an incandescent valley some 1200 tons are tied up nuder a lamp, which is expected to burn from 2000 to 3000 hours without discoloration.

A SAN JOSE paper continues to pick away at the Viticultural Commission, which is held responsible for every unfortunate turn in this business. The fact that the editor owns a vineyard, for the crop of which he has only been offered at the rate of \$9 per ton, may account for his apparent desire to prove a short crop, hoping thereby to raise the market price of grapes. With this knowledge of the inside running, his entirely disinterested opinions on the merits or demerits of the Commissiou may be fairly questioned.

THE BREENT hot weather in the Napa Valley has had the effect of reducing still further estimates of wine yield for the year, The falling off is especially apparent in the white wines, which are consequently more active at higher figures. C. Carpy & Co., of Napa, were the first to begin crushing in the valley. The grapes coming in from Davisville. In the matter of prices, the Culistogian says: "if grapes have been sold for wine more than \$12 per ton we have not heard of the fact. Sales of Melvoise are reported at \$8.

Wine-making in the vicinity of Cloverdale is reported very far advanced for the season. Nearly all of the wine-makers have been active in commencing early so as to avoid the great amount of sugar which accumulates by over-ripening. It is est.mated that the yield of wine will fall short 50,000 gallons, owing to the drying of grapes on the vines on account of the hot weather. The prices of grapes are said to range from \$6 to \$9,50 per tou.

The American Agriculturist has some interesting statistics of savings banks in California, where the average is in excess of all other parts, being \$788 for each depositor. In France more than 2,000,-000 depositors are credited with \$503 each. In Rhode Island the average is \$501; in Vermont \$361. New York has an average of \$349, and New Hampshire \$335; Massachusetts has \$300; Maine \$328, and Connecticut \$255. France, as is well known, is one of the most thrifty countries in the world, and the saving habits of her laboring classes are remarkable. The large average shown by California is proof of the claim that is so often put forward for that State, that wages are, as a rule, higher there than clsewhere, and that the expense of living, particularly of food, is less than ou the Atlantic scaboard, and that the climate is such that labor is employed during all the venr. There are none of these long breaks en employment which occur in the States of the Eastern and central parts of the Union. The grain fields are ploughed and sown between November and February, then follows the care of orchard or vineyard, until the period of having or harvest in May. The harvest period lasts along until it rounds out the year in October.

THE LATEST San Francisco prices for grapes are as follows; Rose de Peru, 35@ 50c.; Muscat, 35(#50c. per box; Malvoisie, 15@45c.; wine grapes (per ton), \$18@20; Tokay, 30@ Coc.; white grapes, 25@ 40c.; Isabella, \$10 1 25.

Wine making is in full blast in the Fresno district, and fermentation is reported progressing favorably. But \$10.50 is being paid for grapes, and large quanti-ties are being dried, the prices obtained in that condition varying from 21, to 31, per pound.

WHOLESALE MARKET.

Quotations given are for large lots to the whole

CALIFORNIA RAISINS.

Halves, Quarters and Eighths, 25, 50 and 75 cents ugher respectively than whole box prices. Loud a Layers, choice per box . .

forey, to the control of the sacks, per lb. Unstemmed Stenamed Secultes Control Stemmed Seedless " Sultanas, unblencher, in boxes, With Gia bleached, "(d

CANNED GRAPES

Grapes, Moscat, 24g no. \$ 1/40 \tilde{x} 1/50 Galls 4/45 0 3 ft, tins 2/25 \tilde{x} 2/50

Sogar Quotations

California Sugar Refinery price list duted September 6th. Circle A, Pat Cube, 8140; Circle A Crushed, 714e; Fine Crushed, 814e; Extra Powdered, 814c; Dry Granulated, 77 sc; Confectioners' Circle A, 74 c; Extra C, 67 se; Golden C, 60 se; Star Drips Syrup, in bbls, 30c; hf do, 3212c; 5-gall kega, 371 get 1 gall tins, 471 ge per gallon,

Price list of the American Sugar Refinery daled September 6th; Extra Fine Cube, in hbls 81, c: Circle A Crushed, 81, c: Fine Crushed, 81 te; Powdered, 81 te; Extra Fine Powdered, 84 e; Dry Granulated, 77 se; XX Dry Granulated, 718 c; Confectioners' Circle A, 7c; Extra C, 63, c; Golden C, 61/c; American Golden Syrup, iu bbls, 30e per

FAIR AWARDS.

Counties Which | Were Awarded Preminmsfor Vittenitural Display.

The committee appointed by the directors of the Mechanics' Institute, to decide on the merits of the Horticultural exhibits at the Fuir have made the following awards in the matter of fruits fresh and dried:

Best display of table grapes, variety and xcellence considered, \$50, Butte County, Second best display of table grapea, variety and excellence considered, \$30, Stanislans county.

Best display of wine grapes, \$75, Sonoma

Second best display and quality of wine grapes, \$50, Contra Costa county.

RAISINS.

Best display of California raisins, preminm \$50; R. C. Terry of Contra Costa

Second best display of California raisins, \$30; John Bidwell of Butte county,

OLIVES.

Best samples of olive oil by the producer, premium \$25; awarded to George F. Hooper of Sonoma county.

Best samples of pickled olives, premium \$25; awarded to George F. Hooper of Sonoma county

SOUTH AUSTRALIAN vignerous are exercised over the law of wine labels, which render it compulsory to use the words, "Bottled in South Australia." The sentiof all the leading producers were in favor of repealing this objectionable clause in the Distillation act, and steps are now being tuken to carry into effect a resolution adopted, to bring the matter up for action by the colonial officials.

Subscribe for the MERCHANT.

THE RAISIS TABLET

Strong Protest Against the Mills Bill

Desiring to refute the statements made by A. B. Butler recently in regard to the Mills bill and its effect on raisins, the raisin growers of Fresno county have ar ranged the following address to the public, which all the growers, with but three exceptions, have signed. This shows the feeling of people in the raisin business regardless of party. The address r ads.

To the Public We, the undersign d raisin and fruit growers of Fresno county taking this method of publicly expressing our regret that any person or persons substantially interested in the raisin and trust growing industries of the county, should have allowed themselves, through personaambition or for political reasons to g upon record as favoring the passag of the Mills bill, or any measurelacking to the reduction of the small protective duties now levied on imported raisins and fruits.

If it were true that the rebat mow allowed for damaged raisin equals, or nearly equals the reduction made by the Mills bill, then the bill would surely fail in that particular of its avowed object, the reduc- | B. R. Woodworth, Las Palmas, 160 acres, tion of the revenue, amount to nothing atall. But such is not the fact. On the contrary the reduction is not allowed for damage does not exceed according to the most reliable data obtainable, one-fourth, at most one-third of the r duction contemplated by the Mills bill, and the saving to raisin-growers by said bill would not in any case exceed two-fifths of the reduction cotemplated, to-wit, 25 per cent, and the small saving that would accrue to us in the business, if any there were, would be drawn almost wholly from American producers E. H. Gorld, Gold vineyard, 220 acres. and laborers, and such profits we spurn as (Samuel L. Hegue, 12) acr s noworthy to be accepted by any true Amery (e. 1) Halson, fou across ican citizen.

We do not wish to be understood as saying that we would profit by the Malls. Daniel Nichols, 100 acros. bill, but that a small percentage of the H. Granz, Granz vineyard, 50 acres. loss might be regained from our America: J. Y. Devenage, Carolina vineyard. laborers and producers. As final and cons. I', Grach, Sophic vineyard, 40 acros conclusive proof that the raisin-growers C. W. Myers, 10 across of California are entitled to protection at Hiram Southworth, 20 acres the hands of the Government, we esteath George E. Geolinch, 20 acres, fact that we have to pay from \$1.25 per. D. McLaughlin, Midden vineyard, 60 acres day and upwards for labor, while Malag., J. W. North, 40 peres. and other countries, with which we are re. H. E. C. ok, 80 a res. quired to compete, pay not to exceed 40 K P F midd, Goodback vineyaid. cents a day for labor, and while they can 35. H. Haching, Belle H. vineyard, lay their raisins down in New York for S. M. K. Chambers, Grassnop vincyard, cents a box freight, we have to pay from C. C. Smath, Jersey vineyard, 30 to 35 cents a boy to transport our Emil Entropy Martha's vineyard, 3 acres raisins to that market, giving the Spanish E. Knapp, Waysid vineyard, 20 acres, growers an advantage of from 40 to 45 °C L W tr. Widter colony, 25 acres cents per box in labor and freight alone. It Stewart, Joryone vineyard, 20 acres.

The imposition of the tariff, while it J. I. Levery, but acres has prevented Spanish raisins from being Nellie Boyd, G. F. S. well, F. F. Ball, Edplaced on the market at prices that would drive the home product from the field, B.F. Sott, 40 acres. has not increased the price to the con- ti orgol and, to acres. somer, for, on the contrary, by enabling A. Warnekros, 20 acres. the industry to become firmly established. G. argo B. Rowell, 20 acres. at home, it has increased competition, and Mrs. Com Palmer, J. Jorgensen, 50 acres raisins are now selling at from \$1.50 to M. K. J bics 1, 20 neres \$1.71 per box, instead of from \$2.50 to 41 Mals in the neres \$2.75 a few years ago. And we help y. J. Harsen, 40 acres. that the removal of the tariff on raisins E Root, Was Moller, 20 acres, would only temperarily reduce prices, for S. L. T. D. C. ceres could the home product be driven from Y as Hars and success the market or seriously emploid. Spanish: Alfred P. Armold, 20 acres. shippers could soon dictate much higher L > 1 as, 1 acres. prices than are now paid by the American G. A. B. C. &barr. Sol heres. consumer, so that the only persons injured. G erg, W. Fader, 20 neros, by the tariff are the Spanish and other Carreletes at, 10 acres, foreign producers. We, therefore, maist T. W. Lov. 20 nores

that the tariff should not only not be read to the A. Tr. G. H. P. t. rs. at 1 and 1 her what they have not made their calcuia. I, but should, in justice, b. raised to er to bis per pound, thereby placing us on an a posity with foreign growers is 1. If withing their advantage in the sport there is I to ighte, and yet impose-Light profits in their than aboved on L. Ames G of 200 at s that preed in cossity of poor men and be-

We report that we regult that certain is is a linter sted in the industries of these J. I. S. d., 40 mass ounty have seen fit, for personal and pelittle if its mest of assist, as far us they are the best and rest of this county and State and as we verify believe, to the entire ontry. As I we have denounce the Mads bacas damiging to the industries of this county and the entire country, and as an quantity we have booking ultimately to fire trad , which means rum to our raisin and

W. Fass h. Forsyth vineyard, 160 acres Robert Barton, goterne manager of Barton Vineyar I Estate, 520 acres,

J. L. Goodman, Goodman, vincyard, The acris

Kennedy, Kennedy vineyard, 160 acres. f. Eas in Elsen vincyard, 650 acres. G. H. Melter, Midter vineyard, 160 acres

A. P. Adams. Land vineyard, 129 acres.

R. H. M. Donald, superintendent of Fresno vincy aid. 450 acres.

F. H. and K. A. Boll, Ball vineverl, 117. ACT S

vino varil, 320 aeros.

BCF: %.

was Proclam, 20 acros-

asson, T. B. Soc. M. n. C. Sanstellt, Cur. Latrices amiss, tis Fruit Company Charles L. North | The grapes of the future will be, above F. J. Galloway, N. W. Massly, 20. 11 7 - 4

[10] L. A. G. of L. 20 pers.

Johnson, Could 20 pers

J. A. Genel 20 pr.s.

F. Burtilie at 40 percs

A. Barello access

Harry D. v. uhr. 20 acres

S. J. H. (Dr. 20 Jones

THE GRAPES OF THE PETERS

 Hm_{\perp}) is the last () k, (is an tr man friends say or the electric condiment however, to suit the wid-ly differing tastes than appetite " as our Trench friends express it, with sold follow Point No York all Frank and Williams Art rate in gath with food which he would so in to look at when not a tadly suffere from want of nourishment. The And is an people have been hungry for 2041 s and the one of the fruit grower has been top to show grapes, no matter of what kind, so becomes they are grap's, and plenty of them and they would self and prove or should . Quanty being always antagonistic to quality, this retri grade movement has continued unit, we find a in we fourt of the Champson Perkins, immatur. Ives, and other viletrish in the market than of any other in brof, mer-Austin & Hatch, Hedgerow vineyard, 100 poor and really wirthliss stuff than good In this, as in everything else, a reform street, since he is perfect the interest of producers of native wines M. Martin, general manager of Iowa in evenient becomes in vitable, when abuse is long-continued in Loppinson. The mass es have had then fill of fruit bearing the semblance and the can, of grips, and new are beginning to take time to taste and C. K. Kirby, Sorra Park, vineyerd, 250 entities the gradity of their grap s, instead of gulping them down like sugar coated

The presshes repeated it uncorsingly, that "appearance, not quality, is the criterienwhich largely fixes the market price of fruits." This is no bag a true, at bast not more than in part. People begin to discriminate between good, bud and indiffer int, and the demand for that which is could is steadily increasing. It is a fact to sobyrous to admit of discussion, in fruit culture at the of producing sugar enough to supply least, that the demand creates the supply much quicker than supply creates demand I, therefore, built with pry the dawn of a better day in the hour noef first culture For proof we need go no further cost than should happen to be repealed by Congress Boston, the home of American Herticulture, as is proposed, a large trade may grow up where the people always have taken and still continue to take, the matrixing inclears.

In Boston markets, the pair grapes referred to meet a slow sile at a aer prisuch as Brighton, Will r, Dadless, Word E. Deliware, etc., s., s. reachly at figures profitable and satisfactory to the great I (see this same improvement in public tasts erop out in the demand for veloci- The fruit at these chors sorts, is a matter at course, is more shift wit to produce than provided that the spots have not first been that of wildings, requiring in a confident 1 ther eigh cutture, the vices are not so easily grown for the some classic yet to at an w ers are buying them at the advanced prices asked for them, in by another energy with been added chloride of hime in the proporthe full knowledge of the additional care required and the greater time readily of a crop, pto one one quart of water, oundent that the educated taste of the prople will sustain their effects and outlay, I

all clse, qual grapes, as poor quality is not going to be telerated forever. I believe that nest only the Champson, Hartford, Ives, but also the Concord, Moore's Early, even the Words n. Pseklington, Niagara and all others of the Labruseu spores, will ultimately have to go and give pace to the high and ream-d quality of the Delaware, Brighton, Duchess, Edorado, Empire State, etc.

I result in having the object of my desire the ideal grape - as near at hand as I blicks it to be, but at the present state of our knowledge of grapes, it may not do to dt mpt barning "the grapes of the future"; this we will have to have to the future its if. There must be a number of them, of perhaps more than sixty millions of peo-

L tour grape originators—the Bicketts, the Boars, the Moores, the Campbells, the Romano is, the Jogers, the Groms, the Mansons, the Caywoods, the Culberts, the Marvins, the Burrows, the Whites, the Princles continue their labors. They have done wonders thus far, and there are good indican also that they shall be rewarded with the object of their lives, namely the production of sorts which shall be the ideal "grapes of the future,"

JULIUS C. AMELUNG has removed his office from No. 214 California street to more commodious quarters at No. 10 California strict, where he is prepared to attend to and branches. He makes liberal advances n consignments of swelt wines and brandos, and off is similar accommodations on liv wines if r quired.

THE Scottish Propie of tilagow, says The rellbandana, which is now the banner of the Tree Traders in the United States, was strang-ly enough, the banner of British Free Traders over sixty years ago.

MEXICAN SUGAR

It is said that Mexico, were its agricultural resources properly developed, is capathe entire would for ages to come. The soil and climate are said to be particularly adapted to the perfect growth and development of the cane. If the duty on sugar between this country and Mexico, At the present time. England takes nearly threequarters of the sugar experted from that ountry The backwardness of the Mexican sugar production is said to be caused than ever heard of before, while choice front cby not only a lack of capital but a want of pr per transportation facilities

Fruit Status

These can be removed from white goods by pointing through them boiling water, within old with. If the stains are of long standing, and do not yield to this treatment, dip them in water to which has tion of one table spoonful of the chloride

Subscribe for the Marchant

COLD STORAGE FOR GRAPES

W. D. Gunn, in the Independent, says The average price of good Concord grapes, when stored, was not above three couts. while the prices realized when taken from store ranged from six to ten, and in a few exceptional instances, twelve c hts per pound. One cent par pound will cover all extra cost, include one-half cent for storage, the price charged being ten dollars

According to the evidence of close observers during the past two seasons, well repened grapes have kept in better condition than those not fulls mutured when etu. After being out they should be placed in a cool room over night, or several hours, that the heat may be drawn off. The stems will then be found less brittle, and more safely handled, while any break or bruise occurring from the handling the day before, will be more plainly seen and easily cleaned out. Yet it is the experience of a large grower here, that grapus carefully cut and laid in crates in the vineyard, and conveyed directly to the cold store-room, have kept in prime condition until the close of the aeason-about three months.

The best package for storing is a box six inches deep, about one foot wide and two feet long without lids, if they are cleated to that the one above covers the one under it. The top courses would have to be covered. If desired to utilized ordinary crates for this purpose, they may be cleated at the ends and a center partition made of light stuff. Open crates have been used succeasfully, and some prefer them. Unripe, mutilated or crucked berries should be removed. If shallow packages are nsed, close packing will be preferable. They should be repacked when shipped.

With all the above conditions fulfilled, anccess is not assured unless the room is kept at a nuiform temperature. Thirtysix degrees has proved the best point. While filling the house, forty degrees to forty-two degrees will be low enough. To insure this uniformity a great deal depends upon the method of insulation.

Various plaus have been resorted to, but none have proved more effectual than the sawdust wall of fourteen nuches, and the paper aystem in use by the Highland Fruit House. The former is a wall of packed aawduat, fourteen inches thick, enclosed by siding and living. The other is a series of eight layers of asbestos paper, enclosed in siding, ceiling and lining, and so disposed as to provide several dead air chambers. Ridgeway refrigerators consists of an iccbox four feet wide near the top of one side of the refrigerating room, arranged to discharge the drip water through a series of V-shaped troughs, forward and backward, until all the cooling properties of the water are extracted. The metallic trongbs serve also as condensers of the moisture in the atmosphere of the room.

Experience has shown that dry, cold air is an essential condition for the preservation of grapes.

POISONS AND THEIR ANTIDOTES

The American Analyst publishes the following list of poisous, which are liable to BY PROF. GEORGE HUSMANN. ba taken by mistake, and their antidotes.

of them. The mustard is not, strictly spesking an antidote, but acts as an instantaneous emetic; no sooner does it enter the stomach that it is speedily thrown out again, and the contents with it.

1st. -Acid -Cerbolic, sulphuric, intric. muriatic, nitro-murritic, creosote, iodine, phosphorous.

White of egg well beaten up with water. A tenspoonful of mustard flour in a cup of hot water - Very thick lime water (in the case of sulphurie, intrie, marietie or intromuristic acids,)

2nd Chromic acid, chromates, all preparations of compounds of chromium, antimony, copper, mercury or zinc.

Abundance of white of egg in water. A terspordul of mustard flour in water. Copions draughts of an effusion of salt herbs.

3rd Ammonia, soda, potash, ulkaline, silicates and sulphates.

Strong vinegar and water. Large doses of oil. Large doses of milk,

Jth. Prussic acid and its salts, all cyanides, oil of bitter almouds and nitro-ben-

Continuous and heavy doucles of ice cold water over the head and spinal column. Mustard plasters on the stomach and soles of the feet. Prevent sleep.

5th.-Ether petroleum, benzine, fruit ssence, concentrated or absolute alcohol.

Plenty of mustard flour in large quantity of hot water. Cold water douches. Fresh air. Prevent sleep absolutely,

6th.-Compounds of baryta and lead,

A tenspoonful of mustard flour in hot water. Strong solutions of Epsom salts and Glauber's salts in cold water.

7th. Compounds of arsenic.

A tenspoonful of mustard flour in warm water. A teaspoonful of dialyzed iron mixed with the same quantity of calcined magnesia every five minutes for an hour. Then pleuty of oil or milk, or some mucilaginous tea, say linseed.

8th —Oxalic acid and its salts.

Very thick paste of lime and water by large spoonfuls at the time. After several of these, large draughts of lime water. Finally four ounces custor oil.

9th.-Nitrate of silver.

Large doses of ordinary kitchen salt dissolved in water, after which one teasgoonful of mustard flour in warm water.

10th .- Nitrous fumes or vapors, arising in Vitriol or Chemical Works

Erequent and small doses of strong acetic neid-the stronger the better.

Notice to Wine Makers

I have one of my Improved Continuous Pressure Hydraulic Presses about ready for delivery to any party wanting one. Address

W. H. WORTH,

Manufacturer of Wine Machinery.

PETALUMA - - - -

THE BOOK FOR EVERYBODY.

Grape Collure and Wine Making IN CALIFORNIA.

A Practical Manual for the Grape Grower and Wine Maker.

It will be noticed that mustard is in all For sale at this office. Price \$2. Handsomely bound in clotb. Address,

THE SAN FRANCISCO MERCHANT,

P. O. BOX 2366, San Francisco, Cal.

NOTE: - All orders must be accompanied by the ash or sent C. O. D.

OLIVES! OLIVES!

Mission and Picholines averaging from six inches to six feet high.

Apply to

W. ALSTON HAYNE, Jr., SANTA BARBARA

FOR SALE,

A Wine Press

TV ATZUL

Office of S T. MERCHANT,"

FARM FOR SALE

Two hundred acres in Sonoma County, ten minutes drive from railroad station, Forty acres planted in the finest variety of vines. The balance rich river bottom, and rolling land capable of the highest cultivation. Several never failing springs and plenty of oak and redwood timber on the property. Good house, large barn, and out buildings. Scenery, climate and roads nuexcelled. Good fishing and hunting in the neighborhood all the year round. One f the most elegant and profitable suburban homes in Northern California,

Inquire of "W. H.," office of the Sau Francisco Merchant,

Registration for the General Election,

All electors desiring to vote at the G-neral Election to be held Novemb r 6, 1888, must be registered regardless of any previous registration.

R gistration for the General Election to R gistration for the General Election to be held November 5, 1888, will commence at the Office of the Register of Voters, in the basement of the New City Hull, on WEDNESDAY, August 8, 1888, and will continue until MONDAY, October 15, 1888, inclusive. Office hours from ? o'clock A.M. to 5 o'clock P.M.

The registration of voters in the precincts will be held from October 16th to clusive. By order of the Board of Election Commissioners. BEN. A. PRINDLE, August 4, 1888. Regi-trar.

OLIVE RANCH OF 448 ACRES, :

Or 240 acres in one place and 208 in tha other. Sold together or apart, baving 11,000 olives planted, and commence to bear in 1887. Fully equipped with buildings, agricultural tools, horses, etc. Sixty tons of hay and plenty of grain; fine stream of water. Title perfect. Situated in Santa Barbara county, near Los Olivos depot, Will sell at a bargain,

For particulars apply to

W. A. HAYNE, Jr., SANTA RARBABA.

· · - CAL

JOHNSON-LOCKE MERCANTILE COMPANY,

COMMISSION MERCHANTS.

SAN FRANCISCO.

Sole Agents Pacific Coast. Royal Baking Powder,

Kingsford's Oswego Starch, Walter Baker & Co's Chocolates and Cocoa, John Dwight & Co's Soda.

We will offer a full line of other Grocers' articles shortly.

California's Million Dollar Company:



OF SAN FRANCISCO, CAL.

300,000 JANUARY 1, 1875.... 8 747,488 45 JANUARY 1, 1880..... 750,000 1,160,017 00 2,181,925 18 JANUARY 1, 1888..... 1,000,000

Losses Paid in Twenty-five Years, \$7,500,000 00.

D. J. STAPLES, President, ALPHEUS BULL, Vice-Presiden,

WM, J. DUTTON, Secretary, B. FAYMONVILLE, Asst. Secretary.

OUR NATIVE WINE SHIPMENTS BY SEA.

PER P. M. S. S. CO'S STEAMER COLIMA, AUC. 30, 1888.

TO NEW YORK

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TO CENTRAL AMERICA

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CHALLENGE

Double Acting Wine Force Pump



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For Rostoring Badly Made or Badly Treated, Harsh and Acid Wines.

rial according to directions will prove the Superior Qualities of these Finings

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OLIVE CULTURE.

Byron O. Clark, writing on the subject in the Rural Californian, says:

The growing of the clive for fruit and cal is beginning to attract a share of the attention it deserves, and if the proper idea prevailed among those who are seeking their fortunes at fruit growing in Southern Culfornia, there would be more orchards o this valuable fruit planted. It is believed by many that the olive is slow in making returns for time and money expended, and that there are many obstacles in the way of the beginner, both of which are wrong.

An orchard planted with good two-yearold trees, in good soil and well cultivated. will bear enough fruit the fourth year from planting to pay expenses for that year, and at six years pay as well or better than any tree we can plant at same age. The Hon. Ellwood Cooper, of Santa Barbara, says a six-year-old tree will yield from 75 to 100 pounds of fruit, which will make from six to ten large bottles of oil, which he sells today for \$15 per dozen, and disposes of his entire crop as soon as drawn.

As to the skill and experience required to grow the orchard, there is not as much of either required after the trees are planted in the orchard as is necessary to grow an orchard of citrus fruits. The only difficulty I have found in growing olive trees begins and ends before they are ready for planting in the orchard. I find it (especially the Mission variety) hard to propugate from the cutting. Notwithstanding all we read in the local press of the State, that all that is required is " a sufficient number of enttings to plant the orchard, as they are as easy to grow as willow." Such advise has been the bane of the fruit grower, and many a would-be orchardist has paid more for his experience than would have supplied him with sufficient number of trees to have planted his orchard, and suc. cess would have been the result instead of disappointment and failure. I have had the best results propagating from the suckers or sprouts taken from the base of old trees. They should be of two-years' growth and removed with a portion of the knot from which it sprouted, ent the bront back to three feet in length, plant in virsery rows fifteen inches deep and plow the soil toward them, keeping it well banked up and rnn the water in the center of the row when irrigating, cultivate well, not disturbing the soil next to the cutting, cultivate two years in nursury before planting in the orchard, as a pne-year-old olive is hard to transplant, not having made strong roots. I find this method pays, and will not plant a yearling tree if I can get twoyear-olds, even at double the money.

If you wish to grow the trees from ordinary cuttings, they should be taken as early in the winter as practicable, cut about fifteen inches long, planted in the usual manner of planting cuttings. Some seasons you will get a good per cent. of them to | ing. grow, other years bring few; taken altogether, it will be cheaper to buy your trees, if you have the money to pay for them.

I consider the Mission the best variety to plant; the oil made from it by Mr. Cooper is not surpassed by any, it is a good cropper and is good for either for oil or pickling, and is the only well tested variety that we can recommend. There no are doubt other varieties will be found among later importations that will have special

eace that many will have with the Picholine who have planted it, will, I am afraid, this State, it has been lauded to the skies. but can never be made profitable. It may make a good oil, but it is a shy bearer, and the truit is so small it will cost all it is worth to pick it, and the idea of recommending it for pickling, which has been done by some of the northern nurserymen-The fruit is about as large as a bayo bean, every one knows that the Queen olive always beings the highest price of any imparted olive, and solely because it is large and fine in appearance, imagine trying to compete with the imported olive with such a fruit as the Picholine

In selecting a location for an olive orchard use as much judgment as if it were for any other fruit. Do not say to yourself "the olive will grow anywhere and in any soil; for while it is true the elive will come as near doing so as any tree known, do not take cheap, poor lands from choice. A goat will live on the rocky mountain side, but will grow fat in a meadow. And the same rule will hold throughout all branches of agriculture and horticulture, and you can not afford to buy any but good land. especially if you are a poor man, to start an orchard of any kind, and the same rule will hold good with the olive. It responds to good culture and good soil and it will pay to give it both. If I had poor land on my premises and wanted to make it pay something, I would as soon try the olive as anything, but I would never buy such land from choice on the strength of the common saying, "any soil is good enough for the

Having prepared your land by thoroughly plowing and harrowing it, see that your trees are planted in nice straight rows. Nothing looks so slovenly as to have your orchard planted as though the trees had been dropped into their respective places, the rows so crooked as to put the meandering rows of a China garden to shame,

The trees should be during the month of February, and if you are not ready to plant them, heel them in carefully and they can be planted any time up to May, but I prefer March. It is best to dig them before the sap starts, as if left standing in the nursery and not dug till March or April, they will commence to grow and they will transplanting. It is advisable to give the trees a good watering when first planted so they will not need any more to make a satisfactory growth, but, of course, by giving water freely you can force their growth: good cultivation is all that is needed in connection with sufficient pruning to keep the trees in good shape, from the time the trees are planted till they commence bear-

The process of making the fruit into oil or preparing many other fruits into marketable products, no expensive machinery being necessary, but strict attention to details and through cleanliness are necessary. The sloven is no more capable of making a gilt edge brand of olive oil than he is of will soon come when sufficient fruit is produced that they will be works for pressing would advise trying a few trees and test cial products unless he so desires, which where most of the grapes are found.

an orchard of untri-d variety. The experis of the olives in the United States should lieve not so effective. If we were asked to encourage larger planting of this valuable tree, as it can be profitably grown on any be a serious setback to olive growing in good soil from the sea coast to the base of the mountains without irrigation.

> It only remains for the intelligent horticulturist to give the olive the same attention that has been given other fruts to nake it one of the greatest, if not the greatest wealth producing factor of Southern California.

SIMMER PRUNING GRAPE VINES

The last few warm days, says the Fresno Expositor, have decided alout the deirability of spring pruning the Muscats. The opinions as to the profits of such pruning have been much divided. Charles A Wetmore, a few years ago, when informed of the practice of cutting back the too exuberantly growing young branches of the Museat, shook his head and inquired where such a practice had a precedent; but his and many other grape-growers' experience was acquired in climates very different from our own. The advantages claimed by those practicing summer pruning are many, In the spring, when the young shoots on the vine's have reached three or four feet. these shoots are exceedingly tender and easily broken. A heavy wind at that period is not an uncommon thing, and its havoc in an unprotected vineyard is damaging. After such a heavy wind thousands of shoots may be found broken from the main vine just at the junction between the old and the new wood. A few days more, perhaps, the green branches would have been sufficiently tonghened to withstand the wind, but at the critical time much damage is done. To counteract the force of the wind if it does come, and as a safeguard, many vineyardists cut back the young shoots one-half or more. The proper time is considered just when the berries have set and the blossoming of the first crop is over. At that time a certain stagnation of the flow of the sap takes place, and the cutting back would then not have any sudden or nnusual effect on tee vine. The immediate effect of the cutting back is simply to lessen the force of the wind on the branch. After the cutting there is never any danger of the branch being broken by the wind. But a more far-reaching effect of the cutting back is arrived at. Soon after the cutting back the sap begins to flow upward and shoots be longer recovering from the effect of make their appearance at every joint. Thus justead of the single branch cut back. four or five branches will grow out and as to settle the soil about the roots, but shade the vine. This shading of the vine is of the greatest importance. The Muscat is the highest bred and most tender of any grape, and exposed to the direct rays of the sun the berries will burn and dry up, causing not only a loss of the crop, but an extra expense in picking out the ery and spoiled berries. Too many of them will seriously injure the value of the raisins or even make them unsalable.

Vineyards which have been summerpruned well in the spring have in this time of the year large crowns to shade the herries. We have lately been through several of them, and very few berries were seen damaged by the sun or heat. On the other making the same grade of butter. The time | hand, vineyards in which no summer-pruning had been practiced had to be protected in different ways. The favorite way is to the oil and preparing the fruit established take some of the larger branches and carry in each locality, and the orchardist need | them crossways over the crown of the viue, value for oil and others for pickling, and I not manufacture his fruit into its commer- thus increasing the shade over the center.

their value, but you cannot afford to plan with the growing demand for the products this method is more expensive and we berecommend either way, we should advise the summer pruning every time, as far as this locality is concerned. In other parts of California, where the Museat does not grow so vigorously, summer pruning may not be of advantage; here it decidedly is.

PROBIDA'S WINE GRAPES.

Under the above head, Mr. E. Dubois of the San Luis Vineyards, near Tallahassee, Fla., writes as follows to the Florida Farmer and Fruit Grower; The Norton or Norton's Virginia is a mild grape that was found on Cedar Island, Jam's River, Va., in 1835, by Dr. F. A. Lemark, and first introduced by Dr. D. N. Norton, of Richmond. For several years but little attention was paid to the grape, Catawba being being the leading variety for wine making, and Longworth, the father of American grape culture, having pronounced Norton worthless. It was only after some Missonri vine dressers had discovered the real merit and value of the Norton as a wine grape and this variety was planted extensively in nearly all the wine growing sections of this country where the season is long enough for its thorough ripening.

The Cythiaua, which has been called the twin sister of the Norton, closely resembles the latter, so much so as to have been believed by some to be identical with it Close observation of these two varieties for the past four years enabled me to notice, in some points, a marked difference between them. The hunch of the Norton is long-shouldered, compact. The bunch of the Cynthiana is also long and compact, but generally more broadly shouldered. The berries of the Norton, as well as those of the Cynthiana, are small, although lrrger here in Florida than anywhere else where I have seen them. They are black with a blue bloom, juicy, vinous and very sweet when fully ripe.

The juice of the Norton, when fermented on the husk, makes here a dark red wins of much body and color, and of pleasant bouquet, without that caffeine flavor existting in the Norton wine from Ohio and Missouri. The Cynthiana makes a still darger wine with at least as much body, and it must weigh, on Oechele's scale, a little higher than the Norton's (from 110 to 118 with us.) The Cynthiana wine properly fermented compares favorably with the fine imported Burgandy, and if turned into Post none of the European grapes cultivated in California and used for that purpose can compare with it. Tha Norton and Cynthiana grapes fermented together make a first-class claret. The Norton wine, owing to its high percentage of tannin, possesses great medicinal properties and is particularly valuable for dyaentery and diseases of the bowels. Both grapes are now recognized by all experienced grape-growers as the most reliable and most valuable grapes in America, and will add that they are the most reliable and most valuable grapes for Florida. They will thrive in almost any kind of soil, and while in a high level ground they will hear immense crops, on a hillside, not too steep, the yield will be lighter but the quality of the fruit much superior, imparting its auperiority to the wine.

To KEEP olive trees healthy, a San Diego correspondent suggests drenching them But two or three times with strong soap-auda.

ADVANTAGES OF PLANTING VINES SAND PEET

A Treatise prepared by Charles Krug, Commissioner for the Napa District

The most common system of planting adopted in California is that of squares, with the vines placed at seven feet apart, Some sections adopt a greater distance, eight feet prevailing in many interior dis tricts -- some vineyards even exceeeding this, running up to ten, or even twelvefeet

greater distances have been These chosen for several reasons. It greatly facilitates the plowing and working of the vines, gives a less number to plant, prune, and care for, and where raisin and table grapes are desired, the size and beauty of the berry is considerably improved.

European countries, devoted to wine making, crowd the vines close together. two and one half to three feet from each other to the rows, and the rows three or four feet apart. Close planting is particularly practiced in the renowned vineyards, where it is thought the small quantity of grapes thereby produced on each plant adds to the quality of the wine

In the spring of 1881 I had sixteen acres of choice varieties of via s planted on Howell Mountain, and chis for distances three and on shalf feet in the rows. the latter being fourt on feet apart. I selected this method on account of the east T plowing secured there by on the steep hillside. which formed the locality chosen. Lately I have adopted this method for planting on valley land, convinced that it possesses many advantages over the "square" sysadvantages may be enumerated, as follows:

- 1. Fifty per cent of the plowing now done with one horse will be performed with two animals and a large plow, thus securing deeper and more perfect tillage. The larger tools accomplish the work more rapidly, and three or four herse tools may be easily and safely worked in the rowseach one forming a complete avenue.
- 2. The gathering of the brush will consome only one-third of the time and labor! that is commonly employ if in carrying it to avenues some distance apart. Here the printings may be thrown into piles at convenient distances along the fourteen-fect rows and burned, without danger to the vines, and each pile will thus return tests respective vines a fair portion of the fer ulizers produced in its ashes.
- 3. Sulphuring may be done more quick ly and economically in the fourteen-feet rows, as a cart or wagon may be used to haul the barrel of sulphur to the laborers -this throughout the whole vineyard, and the driver may even assist in the work without leaving his vehicle
- 4. Spraying the viness a practice who h is likely to come into vogue in our vineyards some day, as it has in Laropean vineyards -- would be greatly facilitated, in that the whole appliance may be hauled and worked by horse-power. At present the prevailing custom is for each operator to carry the solution in a reservoir strapped on to his back.
- 5. The empty grape box scan be easily and directly distributed to the pickers, and the boxes, when full, may be placed directly upon the wagon to be haubid to the cel-Much time and labor is at present wasted in forcing the pickers to carry the heavily loaded boxes some distances to the avenues, perhaps from the middle of the block

6. When cultivating has ceased - usually in June-for two months, the teams, which are otherwise likely to be idle, may be profitably used to improve the land by healing manure to the vines, filling up low places with dirt or sand, or carrying off roots, etc. Also, the work of preparing drains and such grower of olives is not ero oled in his bar may be easily and cheaply done without. in anywise, into ifering with the growing

But this method recommends itself not only for planting new vineyards, but also for changing old vin yards from seven by seven feet to three and a half by tourteen feet, or from eight by eight fort to four by sixteen feet, giving the propriet it a fine opportunity to transform his vin yard from a classifiera root vineyard to a resistant root vineyard. This can be accompaished by planting resistant roots in the alternate rows to be preserved, right between the two old vines. As soon as these resistant roots produce four feet long cames, the adjoining old righters vines, in the same rows when attacked by phylloxera or otherwise may be taken out and the cames from the resistant vines laid under ground to the place where the old uniferr vines stood which layers with the support of the nour ishments from the mother roots, will make a rapid growth and soon be strong enough to be grafted. In the meantine, the second rows should be taken out as soon as the grafted resistant vines and layers are producing a crop. They then continue to bear their usual amount of grapes, and the income from the vincyard is only slightly less and during this transformation.

Our old vin-yards (lanted to Mission and tem heretofore employed. Some of thes: Malvasia will soon be matters of the past Fine varieties are being grafted on their roots, or the old strings are pulled out and resistant stock put in their place, when grafting to fine varieties, follows in a year or two afterwards. Vineyards suffering from the ravages of the phylloxera argreatly favor d by this process.

> For variety's, grafts are taken mostly from Cabernet Sanvignon, Cabernet Franc, Pe tite Sirrah, Mondouse, Miller's Burgandy St. McCaire, Beclan, Cirignan, Mataro Tannat, etc. (red), or from Riesling, Senial lon, Sauvignon Blanc, Follo Blanche, Tram mer Sylvaner Sanviguon Vert, etc. (white

The low price of grapes and vines which ; have rub d during the past two years have caused a perfect stagnation in vineyard planting in our district. Many parties before interested in viticulture are discourage d. regard to success are without foundation. Inferior wines will soon disappear from our handle sixteen tons of olives a day markets; only fine wines will be othered t consumers, the demand for our better goods will continue to steadily mercase and the common souse of the American people will not, as toas been thought by ome, be permanently mislead by the Prehibitionist. Wine and brandy ware houses will give the vintner a chance to refusrumous prices. In short, our industry wild soon again see better days, and grape growing and wine making will yet again by the best paying industry in our glorious Stat-The courties raising the best dry wines will stand on the top of the ladder and command the markets of the country

THE MERCHANT IS bargely circulated in the Hawanan Islands.

OLIVE OH WORKS

A San Diego correspondent of the Ealitornian says

The ripening of the objective here exter 1from November 1st to March, so that the vest. One good man will be able to gather from one to two thousand didlars' worth of olives during the ripening season picking they should be hand picked like cherries, one man long able to pack forty gallons a day. Ohy, s for oil can lost be gothered when fully rip , like rip grates by shoking the tree an Lentching the filling fruit on canvass spread under the tofast as gathered spread, the to earth, their brick po ferred, not over three inches de p to dry. They should be stored so their oughly every day that enchooling is tally Stir each day for three or four days whe they should be run through a facin ug mil and all the stems and blaves who can be at They are now put ante a great hopper and ground, but so as not to break ned violthe pits. Run the pulp or crash do nointo exhibitional passes, fashnoned like a cabapress, and with ser-w power slowly express the oil. Much stress was laid on deing this expressing slowly, so as to force out as little as possible the fibrous matter of the oliv-The oil that runs of its own weight i-"virgin oil," and commands a high pric After the oil is all expressed it is drawn off into tin vats, the top oil being pumped our and put into vats by itself. It is now left one hundred days to settle and d posit al fibrous and alhuminous matter. The oil is now put into large felt bags, which are firs' lined with cotton, secondly with tow, and thirdly with hair-cloth. The oil Sowly percolates through the hair-cloth, then the tow, through the cotton, and through the felt into the bottle. No toborco smoke nor strong odors of any kind are allowed in or around this oil factory of Mr Kimbell's The atmost cleanliness pervades through al processis. The presses and vats, so far as may be, are of granite. The basin in which the o'ry's are ground is made or granite, bink and coment. a thick, circular grantes stone, several feet in distinctor, the circular sides, thoring out, the Government power to enter on land to ward like a dishpan, are made of back and treach and so by permission of the owner. Cortland cement. This particular hopper An instance of a vidow who refused to and the quality of future vintages produced will hold for pounds of olives. M ving on allow her land to be tremened unless she from these will soon surpass all previous this grante base, round a word in hist or processed a "pattry hundred or two," is post in the center is a solid great, which several fort thick will nearly a forting hi ameter, weighing 5000 periods incchanicism of the ser-w-press is that a pressure of fifty tons can be ctained. The machinery for bottling, cerks destruction of such plants, I wish to assure them that their doubts in [119], scaling and labeling is all of the most approved pattern. This oil factory our

> It will be seen from this descripton that the making of olive oil is a much mere intricate and expensive process than deving apricots or making raisins, and the growers of olives will always be a les, at the mercy of all manufacturers But even with this drawback, I believe it to be one of the most profitable trees that can be grown, and that there is no be get of overstocking the market Held I was to invest in land near National Cary or Sa Diego, I should certainly plant it chi fly to

GERTONG AINEYARDS.

At a special meeting of the Greening Vii and Fruitgrowers Association on Saturday the Chairman stated that efforts to obtain further compensation, or be permission tot.

replant certain portions of the district had failed. Two members of the Association, Mr. l. Marendo and Mr. F. Inner had planted vanes, and the Government Inspecfor had or lead them to be destroyed. Acting und r leg dadvice the vignerous named to sted to comply, and it is expected that the travernment will enforce the law. The meeting resolved to support the action of the vignerous, and agreed to the formation of a D fence I and if the Government took

Mr. W. Craike, President of the Geelong Win and Frantgrowers' Association, in a buter published recently says the Argus recently called in quistion the policy pursolid by the Department of Agriculture in eards oth orall attent of vines at Geolong Mr. Craiks stated that us the great bulk of the vines distroyed were at great distances tion the phydoxera-offected plants, the ir balanty was that instead of three years, thenty years well his clapsed before they would have been destroyed by the pest

The efficiency of the department hold that the report of the Parliamentary Select Comwhich sit in 1880, showed that the vil no taken astified the members in reporting that all the vines would have been distroyed by the pest within a limited p riof The compensation paid by the State out duto £21,023, which was expendol . sor an area of 852 acr s, the average ently being £21 13s, 6d, per acre

The complaint made by Mr. Craike that he Government would not listen to repeati appliestions made by different vinculture s creto's that the infected ground should be ir nehed is met by the assertion that in Au-24-t. 1885, the owners of the vineyer Is were written to by the department and off red to have their property strengled free of cost limited in replicative received to twentyme except irs issued. S v ral of the owners other objected to the work being carried at on account of their land being planted with front-trees, or wish-d action delayed until after harvest. Two persons alone whote giving their consent to the trenching being lone, but afterwards a few other vin yard proper tors agreed to the State undertiking the work. In no case, however, has juoted by Mr. Craike, and the officers of the department mention that she demand d The | £1000, and would accept nothing less. The land was covered with fruit trees, and the Let did not permit of compensation for the

OLIVE TREES

The olive tree is a good grower and a good beater in this valley, and the people are b guinning to find it out. Dr. Gray, of Calast, put 64,000 young trees, about sixty acres this spring, and they are doing splenbilly. It is generally stated that the olive les not come into bearing for seven or ight years, but in this locality they do but a than that John Mortenson, who lars just south of town, has two trees that ir five years old, they yielded a large croy of clives, and this year they are again booked with front. Experience has proved the olive to yield the most profitably of It is a much that \$1,000 au obtained from this product Our p ple should investigate this It is a tree easily raised, growing f subject e casily raised, glowing from tings and requiring no trigation. It is so that land cannot be too poor for obvex



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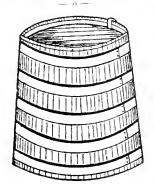
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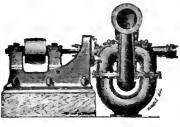
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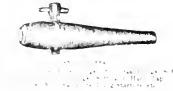
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VOL. XXI. NO. 1.

SAN FRANCISCO, SEPTEMBER 28, 1888.

PRICE 15 CENTS

REPORT OF J. H. WHEELER.

Chief Executive Viticultural Officer for 1887.

To the Board of State Viticultural COMMISSIONEES - Trailemen I am unable to report to y informe while two live months of 1887, having been appointed to the filein March, since which time a fair share of my efforts have been divided to an end avor to properly qualify myself for the Work

It has been my plasent buty to visit and examine many socious of the Stat, who reprominence. I have found the interest in wine-pr houng in at a necestrated in the bay countries.

measure, in Los Angeles, and surrounding values. counti-s, where raisin growing has relatively enlarged in importance.

rei-in-producing center, and a marked interest in the subjet has been communicated to neighboring countries.

The production of raising in Y to county continues important, her resplents conceding no superiority to countries wouth.

Yuba, T hama and Smasta are prived raisin countrie. While S. Lano, Sacramonto. Placer and other foothed countries are proned for Eastern Lank ts.

late mark-ts

come from Napa, Sanama, Santa Clara, Alameda, Los Angeles and Fristo e inties Santa Cruz is making rapid sinds in this direction, and some interest is being manifested in the planning of wine graps in by mechanical mans. Ventura, San Laus Obispo and Monterly

The greatly more soil value of hand in Los Angeles, San Diege and San Bernare dino counties, tegether with the bur ling of new railroads and their attendant stations. and town-sites, having a turned the attention of the people from viticulture, that few additions have been made to the plan-Litions of the previous year,

In my studies and investigations I have

were the very participant $A=On(\alpha)=1/\alpha$ ber has be a gained als and mreflerly Covalible none of I lip sail' to firmarloung ners putat the same time shorting methy to the

There may be think for all in is might be [1] excises to make to these whose invitable to be to visit their viney arts I have been unable to a visit. to see gt. because of efficial work wish a borner white.

THE SPASSING ALENDAD

The grape growing season of 1557 has the like many probling a same, horacharan torized by the absence of any principle is the same as a rethe industry of vinicities has gain-1 natural pague or source. As still by requisite of two rate some, the grasshoppers, we rule and buse these year in the chiral Γ_{ij} year of M_{ij} have let our respectively full states that i=0 and by north winds, consumed by drought or a provided or a con-The interest has fallen off, in a great full the priyt high-provided randil will, his higher We have had the usual visit form, and state and the grapevine disa beetly, in May, which spray the forwas burned in folloge much by the vines in grapes or so Freshold only has been mean important. June, if in importaneous with this visitor, pension of fixing seven of raises presame the fide chinch long, which helmot, has a therein as the altigether, modest on a rein the state decrinely as a though appoints in a small spits in a sorid rate to district and s cur us. The vine happer, it, as some while some minimum speak hather through the man formulable of the messing or the in some sections, while almost disappears ing in ther-

THE VINE HOPEER.

More starm has been monifest to ser thin in their ducing the bulk of shipping grapes design the appearance of this post than in any 2010.1 provide was in and certain varieties. The local mark is are largely supplied that the Treusser scales by $N_{\rm c}$ and $R_{\rm cos}$ by Solano, Sonoma and Santa Cruz coun. Tugs have been their special (r.y. This inties; the latter being presenting thly sorted as exterminated with difficulty, because to the production of table graps for the at derives its in arishment from the sail nly, which we are undood in the rulate with The larger part of our wines at present any person. The case on uning his tay to a 2 ther with the time pr tissue of the Laf may be lestry lity, " as her spraying the bounge with an are not s non-left for the vine hopp restaures or are strongers. The Log per mast locks of a

Su op turn I into the viney and in Fin has proved a value of straining to the conren, does but this is a resort will be as a . Carryluz a tendethnough no ve yard it night - to which they are into her disturbing the vin the private satisfatory labours is me toxical south he soutable for distroying other costs, har as an , ing little with this

Alay principal

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victor life stappears. ... _ nul ordinarily i first ich in st. I say ershnor for hibberts sometimes the sale Sut or in the fractive of . z iv. I have frequentsoft to put if the same a part was of gravel and in the retain fer, escape 1 of the high residy soil

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Most of the enemies of the vine feed in the particular

thermometer marked only 32°, or a little lower. The same immunity would have been had if no smoke had been created.

I am unwilling to advocate smoking excopt as an auxiliary, and then to be employed late in the spring. Damp manure smothered with weeds makes the best smindge, and is far ahead of tar or other materials. To light the piles rapidly, a small amount of kerosene should be poured ou, and the same ignited with a torch or match. If the manure is placed in old sacks or mats it will be found convenient to move when cultivating, will keep drier through rainy weather so at the season of frosts, and may even be removed at the end of the season if desired for another

The theory that vines which have been frosted may be saved by pretecting from the direct rays of the sun when it appears, is exploded. Shading the frosted foliage will not save the vine from damage, nor even ameliorate it.

The remedy employed by Guyot, namely that of covering the vines by mats, though an effectual cure for the evil, is one quite unavailable to California vineyardists with the present cost of labor and material, and the existing values for grapes and wine.

The most perfect cure yet known for damage from frost is the avoidance of the danger, by selecting a warm, protected, and elevated location on which to plant. Here the vine properly belongs in all cases, and is generally safe. There is, however, for those who have been unfortunate enough to choose a frosty locality, some in the method of avoiding damage by proper pruning.

PRUNING FOR FROST,

To do this, so prone the vine that the desired buds shall remain dormant till this danger is past. One method of producing this result is that of leaving the vine unpruned, absolutely, until eight or ten days before the dangerous period is over; the dormant buds requiring about ten days to put forth susceptible growth.

With this system, the terminal buds, and those on the laterals, come out early; and those left near the base remain perfectly dormant and safe till forced out later by pruning again.

Who re practicable, this proves an efficient remedy. There are, however, but few cases which permit of this resort, as the growth of the previous year became so tangled as to require removal to permit of the ordinary operations of the vineyard in spring. Young vines of upright growth, and those grown on poor soil, will permit of the remedy, or it may even be carried on by first tying up the canes to permit of cultivating.

This method causes the fruit to ripen somewhat later, but this is little or no objection in California. A harm may, however, be accomplished by this sudden stopping the flow of sap entirely. I have seen vines pruned in this manner for three consecutive seasons without any appa ent permanent injury to the plant, though the injnry may become manifest later on,

Another method having many advantages over the foregoing, and open to few objections, is that of pruning one half the spars (which would customarily be left), as usua viz., short, leaving the balance of full length. If laterals are found on these long canes, all the better, as the presence of the lateral insures the dormancy of the bnd as its junction with the main canes, In this case, with the approach of warm ing the lower parts.

weather, the short spurs put forth, likewise the terminal buds on the long canes and laterals. If the frost comes it destroys all this; following which the short spurs put out a growth from the secondary buds. providing little fruit, but furnishing good canes for next year's spurs. The long canes may now be divested of laterals, and proned short immediately following the frost, and they will then, after about ten days, commence to produce the same growth and fruit which would have been obtained without frost, or which would have been obtained with the adoption of the ordinary method of short prnning,

Again, if no frost appears, the long canes may be pruned back at the time when danger is past without any serious setback, as by this time the short spars are out and showing fruit. The work, too, is made comparatively simple by the vines having heen previously pruned into shape. The method entails some irregularity in the ripening of the fruit, but this has proved no serious difficulty. But little more labor is required, and the most absolute safety secured. I have seen this method practiced on a large scale with eminently satisfactory results.

The knowledge of one fact will enable the grower to adopt methods peculiarly suited to his locality or variety to be pruned

If the laterals of any cane of fair size be allowed to remain at the time of pruning, it assures the dormancy of the bud at its junction with the stem. This is true in all cases, except when but too few esnes are left in proportion to the strength of the vine; or, when the vine is very small and young, in which later case more canes should have been allowed to remain.

With this fact in view, the pruner of long wood varieties in frosty localities should leave enough laterals on the spurs remaining to insure him against loss. Be it known also, that the laterals, where such are left, may be relied upon for heavy fruiting wherever a case of necessity arises. They will set as early and as well as, if not better, than the original canes from which they spring. Short-pruned varieties which put forth very early in sections liable to frost- such, for instance, as the Folle Blanche-may be advantageously pruned, as before indicated, leaving the laterals on the remaining long canes to insure the huds at the base of these canes continuing dormant. After nearing the frost period, these should be pruned off and a spur of the desired length, with only dormant bads, will be the result. This process I have witnessed-t e results being satisfactory.

Thus it may be seen that, by intelligent pruning, the common damage by frost may be averted, though entailing some additional expense and perhaps some loss to the plant-a loss, much less, however, than that often observed where no remedy is adopted

High pruning is a remedy much like smoking. Where frosts are light, vines trained high will escape the still frost, when if pruned low they will be scorched. A heavy frost will injure both high and low pruned vines, and the short pruned fares worse, even here.

The freeze, accompanied by a wind or gently moving air, has been known to injure the tops of high vines leaving the bottoms untouched. This phenomenon occurs most frequently late in spring, when the folisge is well advanced, thereby protectFUNGGID DISEASES-OIDIUM.

The oidium, or powdery mildew, cammonly called mildew in California, in the most common enemy of its class. The past season has been one of little complaint from this source, probably owing to the liberal use of sulphur, practiced now annually by our vineyardiats. For a full description of this aidium, with remedies and treatment, see Appendix I, devoted to that subject, and accompanying this report.

PERONOSPORA VITICOLA

Is known more commonly as downy mildew. This disease, together with anthracnose and black rot, are common throughont the States east of the Rocky Mountains. They form a present scourge to Enrope, but are not known to California vineyardists. Dr. Harkness states that he has found peronospora moon the V californica, but there only. My searches for this disease, and they have been prosecuted with considerable vigilance, have never revealed its presence in the State. It has frequently been reported to me by vine yardists, but on inspection I have found some other trouble only. When Professor Viola, of the Agricultural School of Montpellier, was visiting California in September, in company with F. L. Scribner, of our Department of Agricultural, it was my pleasure to visit several vineyards with them; but we were unable to find any evidence of peronospora. I exhibited to them various specimens of leaf diseases which had been sent to me for peronospora; but they pronounced them "diseased epider-The "Spanish or black messles." so called in the northern valleys, they did not recognize as anything they had seen before; but did not regard it as very formidable

The conditions favorable to the development of peronospora are known to grow only out of an extremely bumid atmosphere. Actual moisture must be deposited and continue on the leaves-such as results from summer rains. I believe, therefore, that California vineyardists have, in our dry and comparatively rainless summers. an assurance that this disease- one which ranks second only to the phylloxera in France-will never become common. would be idle to presume that it had not been introduced with some of the direct importations of stocks from diseased districts. We should have suffered from its general attack long before this if our climate did not preclude it.

POURIDIE

Is a fungus found to infest many California vineyards, particularly those planted on wet and improper soils. It has been observed only during the last few years, though probably existing previously, narecognized. The disease is well known in Europe, existing there as here, only in spots unfit for vineyard purposes. When found, it had been sometimes termed "root rot," a very proper name, in that it affects the roots, with the following symptoms-The vine shows general signs of enfeeble: ment, growing sometimes for a short period with increased vigor, but soon relapsing into a meager production of foliage and subsequent rotting of the roots, both large small These latter exhibit a brown color. and appear saturated with water, so much so as to show water plainly when cut. The trunk of the vine continues healthy, though the foliage appears like that of a vine infested with phylloxera. Vines affected may continue to live for six, ten, or even

are more or less favorable to the development of the disease. A large area may become injested in a short time if the whole is similarly situated. The disease thrives in excessively humid soils. Particularly is this the case where there exists an impervious subsoil, which forms in a subterranean basin wherein there remains stagnant water. Germs of the disease may be introduced on the vines themselves, or may come from vegetables or trees.

At first the new fibers of the affected plant show no signs of the attack; but soon swellings will be seen on the old roots which break through the bark and protrude a pithy growth, which soon becomes dead and rotten. After some time the whole substance of the root decays to such an extent that the vine, at this stage, may be easily uprooted by hand. To cure the evil, one can only hope to so modify the conditions of the soil as to prevent the further spread of the disease, and then destroy the vines on which it exists. They should be immediately pulled up and burned on the spot, to avoid any diffusion of the spores to other places. Following this, the ground should be thoroughly worked over and drained. Leave the spot unplanted for several years, after which the place may be again planted to vines.

I have had several samples of this disease sent me from the counties of Sonoma and Naps, besides receiving reports of its presence from several other counties. The malady cannot flourish on well drained soils-soils to which alone the vine belongs; but the vineyards of the wet lowlands or undrained uplands should be carefully guarded against its introduction and spread.

Before leaving the subject of diseases of the vine, I should remark concerning the trouble which has occured in many of the vineyards about Orange, Anaheim, and elsewhere in Los Angeles County, that the attention of our leading scientists and students has been repeatedly called to tha nuknown disease, and they have as yet failed to identify it as due to any particular fungus or parasite; and our former impressions continue concerning it, viz: that it is purely the result of climatic influence,

Sudden or unfavorable changes in temperature produce like results in the northern counties; but are not of such general occurrance. I have known many vines killed thus during the past year.

A warm spell in winter preceding a cold one, though the latter be not a regular freeze, may kill the vine or so nearly destroy it that it dies the succeeding summer. I have received recently samples of vines so injured. Examination of the buds, which had failed to put forth, showe a brown and dead center-proof of the presence of moving sap in cold weather. The collar of the vine-that part of the stump which joins the trunk to the roots-was found dead and brown. Inasmuch as this is the tenderest part of the plant exposed, it suffered with the buds, from a winter start of sap succeeded by cold weather, Vincs so affected and others near, but not exhibiting the same signs of the attack, lingered through part of the summer and died in a manner similar to those noticed in Los Angeles County,

Those counties favored with occasional warm and springlike weather in midwinter, are, I believe, most liable to complaints of this nature.

PHYLLOXEBA.

The spread of this insect has been far fifteen months, varying as the conditions more rapid during the past sesson-favored by drought as it has been-than ever before. Abundant new spots have become manifest, and soveral new districts have been added to the quarantine list. I have found new instances of their spread by the use of cuttings taken from diseased vineyards; though convinced that their principal means of distribution has been by rooted vines.

I have found the winged insects common throughout the months of June, July, August, and September, giving them a long season in which to increase the infected territory.

Few of our vineyardists appreciate the fact that the progression governing the inprease of this pest is one of geometrical ratio -- not an additive one; and though it may be several years before the presence of a few insicts become evident in the vineyard, from that time on the spread is alarming, and, without stern resistance be offered, the giving way of a few acres, or even a few hundred vines, means the losof all within a limited number of years.

The reports of the Commission issued heretofore concerning this post, and the best remedies for its exterimination which we have urged for adoption, are more than ever confirmed at the time of this writing As proof of this I am able to give the fol lowing, which I translate from the repor-M'La Commission Superieure du Phyllexera, of France, for 1887, representing as it does the results of unlimited experiments and long years of practical work

The struggle against the phylloxera goes on by sub-

Submerson, num er of acres treated 58,582 Sulphule of each n, n inder of a rec treated 165,512 Sulphule of each number of acres treated 465,512 American vines, number of acres treated 416,252

It may thus be seen that great preference is shown for resistant vines, the acreage rising in two years from one hundred and sighty-eight thousand two hundred and ave acres, to the enermons figures of four aundred and sixteen thousand two hundred and ninety-two acres. This answers the question so often put to me by vine growers: "Are resistant vines a success?" have published advice on this subject continnally, but there do not exist to-day in the whole State, two thousand acres of resistant vines. Those resistants which have been properly selected, planted, and cared for, are to-day monuments of success, but they are too few to save us from the growing ravages of this pest.

It will be noted in the above, that the ise of carbon bisulphide has largely inreased in France, that the use of sulphocarbonates, because of the great expensattached, has grown less popular. The number of vineyards submerged is nearly constant, because of the special natural repairement of the process. For fully particulars concerning the success of different remedics in Europe, and the resistant vines most popular at the present day, the reader s referred to Appendix V of this report, which treats of the results obtained in the vine, ands of southern France by the use of various methods and various,

California vin varilists can point with pride and assurance to the painting of grafted resistant vines, belonging to Mr. Julius Dressel of Sonoma, where, in the midst of ravaging phylloxers, and on soil of very moderate worth, a magniticent yield bl choice varieties has already been secured by this means. Others have been similarly successful in growing and grafting resistant vines but I have, as yet, found no Mountains.

other test to a very unjus nature as that conducted at Mr. Dressel's vineyard, Mr. Dressel states that he is perfectly satisfied with the Riparia as a grafting stock leasy to root and sufficiently vigorous in his soil to supply any vigorous growing variety The Lenoir has been growing rapidly in favor in California, because of its rapid development and easy grafting. It proves difficult to root, but is preferred over the Riparia and some oth rs, because it furnishes a wine suitable for b'en ling as a direct producer. But grafting is both expensive and slow, and, in fact, the value of carrying on any warfare may be somewhat. altered by the present depressed condition of agriculture in California.

Daring this secson, whin grapes for wine miking have in some instances sold for as low as \$7 per ton, and the average in many districts has been only \$12, the question has arisen. Would it not be but er whon the phylloxera appears to replant in l reconstitute the vineyard with prime rees, almonds, olives, or other fruits nuuse public to the phylloxica? There are ases, whire, unless there exists some pecial reason for keeping up the vin yard, siz., particular appropriateness of soil and insuitability for other use, it may be best, to allopt this alternative, continuing the production of the vineyard as long as it proves profitable, or at least until the trees should come well into bearing.

Where excellent wines have been produced and a market therefore has been established-particularly if the brand has become well known by advertising at great xpense; or even where expensive facilities for making and holding wines have oven provided-here are found exceptions demanding the continuance of the vineyards and warring off the phyllox-ra, even though the expense be considerable.

BESBU FOUS GRAFTING

I have to say, concerning this method of changing varieties - particularly described in the paper published with this report that although generally tried, the method has proved a signal failure. One disciple of this Commission, residing in Australia reports a success of five out of eight. If such results were possible in California, I should be greatly encouraged to make another effort, earlier in the season, but as it is we are able only to record the experiment as valuable in its negative results providing, as it will, against the g neral or extensive use of it at any future time. My attention has been called to several other methods of grafting, which will be thoroughly tried by me during the coming spring One particularly, that of side grafting, is I believe, of go at promise. It consists in inserting the scion into an incision in the side of the root or collar of the vine, with a partial suppression of the top to force its growth. Thus the growth of the scion in iv be assured before the old vine is cut off and if fuling, no fruit or time is lost, as the progress may be similarly repeated the next year. The many other selectings of this in those will be appearent to vine growers, nor is the mathed purely experimental in California, for it has already been trud! in a very few instances, and these with some sheerss.

THE MERCHANT IS the only viticultural

COLD STORAGE FOR GRAPES.

small front for market, says a writer in Farm and Vineyard, would doubtless realize. great benefit from any method that would infallibly preserve their fruit in a sound condition for several days after becoming gutter in the center. Of course, this floor ripe and mark table.

During the lerry's ason fair fruit is not infrequently look 4 about the streets of pair it is, without I thing the moltil ica large cities at rumously small sums, and yet perhaps in less than three days the same kind and quality of berries equinot be had by consumers for much larger sams, if at all. Consumers cannot take advantage of the winemaking in lastry and the popus of the brief periods of abundance and larity and improved value of other branches, cheapness to my-xtent, except for canning Therefore, fresh fruit for daily table use by the largely pred-ministing closs of people, is quite unatt on the, and yet such uses regular daily consumption—is really the only one from which the highly desirable senitary benefits our befully realized. and to supply which, if once established, would probably require many times the amounts of such fruits not market in

With roll storige, berry growers who have sufficient practical expension and judgment to be r isonably sure of a vield proportion to to the ageng to production. would almost be certain of realizing good returns, could their entire crop always be sure of ready sale for ten cents per quart at retail, and it is not hiz relons to say that five or more families perhaps five times five or more-would use berries daily during the borry wason, where there is one now, if they could regularly obtain good fruit at a uniform price of about ten cents per quart.

Fortunately there is a sure means of preserving ripe perishable fruits in a sound and frish condition for days, and even works It has been demonstrated that cold storage will accomplish this. Even ripe raspber ries have been kept in good condition in cold storage three weeks, while cherries have remained sound and fresh six weeks and ripe fall apples two months.

Haw to secure the conveniences for cold storage is an important question. It is easy enough to say that all that is required is to place the fruit in an apartment in which the temperature is kept invariably as near the freezing point as possible, yet not quite reach it-about 34° to 35° Fahr-uheit But how best to secure an apartment adapted to such use is less easily answered, for the reason that "circumstances after cases," and what would be best for one might be beyond the reach of others. These able to rect structures for themselves can proceed at once to provide cold storag apart-

Even a wooden cold storing building is somewhat expensive. It should be large nough to accommodate all the fruit, in marketable packages, desired to be kept Ever it any on time, and also for an entry or packing room, of intermediate temperature, in which the truit can be cooled gradually before putting it out of the so dung room and modelid bits taking out t ship, to provent the sadden extremes of temperature. A codar under this room for storing box samight boof advintage

Abstraanlagers I found structure is that of an other intervestory to thouse its outer walls briging two spaces for filling with saviest or other suitable mas origin terial, the outer one ton itch a wide and paper published West of the Rocky the inner eight, with also an inner filled standing invitation to our wis makers space. In upper stary is the real reset to go in and possess the mirk in

houses or at bast there must be withcomt room in the upper story to hold enough Frint growers, especially those who grow (see to keep the room beneath cold, if not for the season's supply. The ground four and wales of the cold room must be importions to the passig of air, and the floor above slightly descend to a drainage must be well supported to sistum the weight of ice, but the less papervious to through, the best r. As each ur settler down the warmer on is brought in contact with the upper if or, and the ice upon it keeps the entire void room b neath at near the freezing pont

Fr it gooders in any locality might perhaps units and cooperate in erecting coold storage structure that would a commodate at interest 1 in it, or this might unite their influence to induce some capatalist to provide cold storage facilities. and make a r as mable charge for storage to remunerate him. Freighly the neater the place of shipment the storage-room can conveniently be the better for the fruit. A party who stor's and buils in ice might reasonably be expected to furnish egithtavla I seg or meet exacte bloo-

FOREIGN WINE CROP

The 1887 vintege of France exclusive of Algors, is 642 398 700 American gallons. Italy 820 620,000 gallons and Spain, 739,-552 800 garlons. The following are the average vintages for the post five years of the various foreign countries named.

E 1013417 E1		F + 2 - 1 - 1 - 1 - 1
France		735,361,403
Italy		
Spain		±34,395,200
Portugal		T54 400,000
Austria Hungary		
Germany		-47,116,000
Switz-rland		31,320,000
Tark-y		$-6 \times 540,000$
Russii		52 400,000
Greece		39,600,600
Roumania		-15,450,000
S-IVIA		31,650,000
	_	

 $\dots, \dots, 2,946,230,135$ Total It so ms almost incredible that, with these figures before them-also rves the Fruit and Wise aroger sour legislators shou'd be so indifferent to our magniticont opportunities to out-r the markets. of the world with our vin-yard products. The falling off in the crop of France from 2,000,000 (10000 241 ons in 1875 to 60 (000). 000 in 1887 and the fact that France imports more than half as much as she proluces, shows what a field there is for our own wine growers to only real market hungry for their products, if only they had any to offer. It to ongress are upon the win- bi a before it adjourns, and give our wine growers free brainly spirits to fortify their sweet wines with, and other still sines, too, when exported and put the heavy arm of the law up in the adulteratera and compounders depletation wines. and thus afford a fair field to our mobile young industry, such its is given in every ther country and powitive at all and

Greate in a of the House of R prescritatives, we shad expect to hear from yourn a substantial way of the marry weeks. Two handred the result from its wish to handred to the marry weeks. has afford the new partition is a not an original and professions for his transfer with the profess by reducing annearing the same of the second to the second term of the profession of the second to the second the second to the second the second transfer to a second transfer to the second transfer transfer to the second transfer tr

PANELIRIZATION OF WINES.

(Report by State Analyst Rising

In F. bruary of last year a bulletin (No. 660 was published, giving in a summary manner information on the subject of the pasteurization of wmos, that term having been adopted for the treatment divised by Pasteur, for the final repression of all fermentative action in wine, of whatever kind, by the application of a moderate and strictly guarded degree of heat, under complete exclusion of air.

The poculiar conditions under which the vintage of 1857 was made, involving the introduction of much unsocard material into the wine vats unless can fully hand-picked before han I, tog their with the frequent use of overript grapes, combined to make an unusual proportion of wines that, if not unsound at the very cutset, were exceedingly hable to beer me so under the slightest provocation. There thus arose so heavy a demand tor information on this, the best and most thoroughly legitimate mode of preserving wip s from injurious germs, that the dition of Balletin No. 66 was soon exhaust d; hone it is reprinted here for the information of wine-makers, and with the strenuous recommendation that at least no winery intending to age wines should remain without having at command a pastenrized of sufficient capacity to allow of prompt interposition, not only in cases of actual and obtrusive unsoundness, but whenever a suspicion of danger arises. Such danger will be of very common cecurrence so long as the practice of fermenting with free access of the hot air of our vintage season to the uncovered pomace cap, or to the thin layer of wine on top of barely submerged grated frames of "false bottoms" continues to prevail. Ad who have analyzed California wines, or examined their sediments with the microscope, must testify to the wide prevalence of the acctic taint especially. The latter mode of examination is so wholly within the power of any person of ordinary intelligence, and defines the condition of the wine with such absolute certainty, that it is greatly to be regretted that the microscope should not, with the must spindle and mash thermometer, form a more common appliance in well-regulated wineries. It might seem too "bookish" and "unpractical" to a great many: but those availing themselves intelligently of its services would soon be amply rewarded for their expense and trouble in saving wires from progressing too far on the way to unsoundness. It will indicate the propriety of resorting to pasteurization long before the most delicate taste can recognize any fault in the wine.

It cannot, however, be too strongly enjoined upon those who desire to avail the msolves of pasteurization, that at least for all bouquet wines, in which some quality is expected to be maintained, a sufficient length, and sufficiently small dumeter of the heating coil, and ample cooling power, be looked to. The pipe should in all cases be of block tin, not over half an inch, and preferably less, in (clear) diameter; and the greater its length, and the mass of the heating water-bath, the less liability will there be to injure any portion of the wine by imparting a "cooked" taste. A short and wide heating call innovers the use of a high temperature of the bath. if the output is to be reasonably large; and this is liable to lead to sonably large; and this is liable to lead to rapidity, in a solid column, so that a theroverheating of the externor portions of the passing wine, while interior threads may steadily the desired temperature. Beyond previously contained in it, it is, like any mersed in a 15-gallon boiler; a 20-foot coil

possibly escape ad quate heating, and thus remain to reinfect the wine.

Ad quate cooling power is very essential in order to prevent any contact of warm wine wine with the air; and the emerging stream of wine should not be allowed to "break" as it pass a into the receiving eask, thus avoiding unnice ssary acration. Strict attention to these points will greatly abridge the period of "flatness" that fol lows pasteurization, and requires three to eight weeks to subside. It is usiless to tiste a wine immi dintely after past-uniza tion; for it then holds in suspension the sediments brought down by the heating, which impress the palate so much as to render a judgment regarding the result of the operation impossible.

Pasteurizing, like all eperations in handling wine, requires a little experience, both in the management of the temperature and the maintenance of the best conditions for the welfare of the wine. Pumping directly into the coil is altogether undesirable; the wine should be pumped or run into a receiving cask, through which it descends through a siphon at a nearly constant pressure, greatly facilitating the maintonance of a steady temperature, California wines the latter need rarely exceed 150°, as their alcoholic strength is al most always high enough to insure complete disinfection at that point,

The fining of wines after pasteurization should always be deferred for some weeks, in order to secure the coming-down of all the sediments prior to fining. In many cases the sediment comes down so promptly and in such compact form that, in small packages at least, no fining is needed, and the simple filtration of the turbids after racking is preferable.

It is intended to give cuts of several of the best forms of pasteurizers in the final report on the past season's work, it having been impracticable to prepare them in time for the present publication, DULLETIN NUMBER SIXTY-SIX -- THE PRIN-CIPLES AND PRACTICE OF PACTEURIZING.

The numerons inquiries now being received in regard to the practice of and applunces needed for pasteurizing of wines, render it expedient to put in print, for general information, the main points in the premises.

The essential point to pasteurizing is to heat wine to the temperature of 150°, or thereabouts, out of contact with air. The heating should be done as quickly as pospossible, and after the proper temperature has been reached it is best, other things being equal, to cool the wine as quickly as

Several objects are accomplished by this heating. The one most generally aimed at is to kill the germs of all kinds of fermentation that may exist in the wine, in order that it may be safe from further changes under their influence. Another is to advance the wine toward maturity. Also, to forestall any further deposition of sodiment, by the coagulation of the albuminous matters it still contains, and which enendanger its soundness.

The general plan in the construction of pasteurizers is usually the same as that of the various kinds of still condensers; only, in this case the water around the worm is hot, and the cold wine in passing through the worm is heated to the proper point by allowing it to move with greater or less rapidity, in a solid column, so that a therthe thermometer the wine passes into a cooler from which it is delivered into the well-cleaned) storage or shipping packages. In many cases it is delivered into these directly from the pasteuriz r, and allowed to cool in the tightly bunged casks.

Wines of sufficient age, that have ceased to deposit sediment and are bottle-ripe, may be pasteurized in the bottles themselves, in a water-bath having the proper temperature. This is the preferred practice in the case of high-priced wines.

The temperature must be carefully guarded, since if it either rises too high or continues too long even at its proper point, the wine may acquire a "cooked" taste, and may loose its natural bonquet. Immodiately after the operation the wine is somewhat flat, but in the course of a few weeks not only fully recovers its zest, but is found very much advanced toward ma-

THE BATIONALE OF PASTEUBIZATION.

The effect of this process apon the wine may be thus summarized:

1.-All fermentative germs, of whatever nature, are kindled by the heat; the more promptly the higher the heat and the alcoholic contents of the wine. Wines poor in alcohol, and especially those containing a remnant of sugar, require a higher temperature than those fully fermented out and rich in alcohol.

2.—Acids present in the wine are, under the influence of the heating, partly neutralized by entering into combinations (ethers) which form part of the flavors of older wines. Hence, acetified wines become of milder taste at once, and even milksour ones gradually loose their "scratchiness," if not too far gole.

3 -Wines while matnring in the cask are always found more or less impregnated with atmospheric air (oxygen), the gradual absorption of which forms a most essential part of the maturing process. After pastenrizing the wine is found free from oxygen, providing that it has been absorbed during the process, thus often accomplishing in a short space of time an advance toward maturity that at the ordinary temperatures would have required several months.

4 .- When the heat is raised sufficiently high (to about 160°, which can be done without injury to most classes of wine), the unstable "albuminoid" substances of new wines that continue to cause the formation of deposits of lees, for one or even two years after the completion of the vinons fermentation, are at once rendered insoluble. and thereafter cease to give trouble; the wine, after having been cleared by settling or filtration, forms no more deposits, and can, if necessary, be bottled,

It should be onderstood that while pasteurization puts an end to all further fermentation, it does not interfere in the least with the ordinary process of maturing in the cask. But, save in cases of emergency, it must not be practiced before the completion of the after-fermentation.

Should a wine, however, be found to be 'going wrong' while the after-fermentation is progressing, it may be pastenrized to stop further damage, and will then be ready to be started on a healthy after-fermentation the following seasons, or sooner if the materials (e.g., condensed must) are

PRECAUTIONS NECESSARY TO INSURE SUCCESS.

While a well-pasteurized wine is secure

other wine, subject to reinfection from fou packages, bungs, pumps, hose, etc., as wel as from impure water and alr. Impurwater used in rinsing packages is a fruitfu source of trouble, and the bottling of win in close, most, unventilated and unsulphured cellars is responsible for many bottle of damaged wines, especially if the corl used have not been scalded in hot water From want of these reasonable precautions it has often been reported that pasteurizing is not the universal cure for wine diseases. that, with proper care, it has always proved to be. Just as a dose of quinine cannot permanently prevent the denizens of malarious valleys from contracting chills and fever, so Pasteur's admirable process does not secure wine against injury from carelessness and filth.

THE PRACTICE OF PASTEURIZINO,

Among a score of appliances brought forward by different inventors, a few only have gained wite acceptance. For California practice the "intermittent" patterns will hardly be considered. Of those intended for continuous operation, which alone are adapted for larg-scale practice, there are essentially two types. In one (including the "cenotherms" of Terrel des Chenes and of Carpené) the cold wine passes through one or several metallic (block tin or copper-tinned) pipes immersed in water heated by proper formaces or by steam; in the other the pipes are replaced by a ring-shaped space between an inner and outer cylinder. The former system has, on the whole, been more generally necepted,

As has been stated above, the overheating of any portion of the wine must be carefully avoided. Hence the temperature of the water-bath must not greatly exceed that desired for the wine, since otherwise the outside portions would, in traversing the pipe, he heated up too high, and therefore be "cooked." (The same objection lies against heating the wine in a closed tank by means of a steam coil, as has sometimes been done.) Hence, again, large pipes are unsoitable, as the temperature would be taken too slowly, and as a single small pipe would reduce too much the working capacity of the apparatos, the inlet pipe is made to branch into a number of these, disposed in the form of either a ribbon or a loose bundle of coils. In Terrel's apparatus (which may be considered the most perfect) the cooler is similarly arranged.

For ordinary purposes, however, this complex and somewhat costly construction is very commonly replaced by a single pipe forming a long coil of somewhat greater diameter than those in Terrel's apparatus; and this form, being easily constructed by any plamber, is enfliciently well adapted to the needs of small producers.

At the winery of Mr. Joan Gallegos, near Mission San Jose, a pasteurizer of satisfactory working and output, consists of a 90-gallou "farm boiler," within which is placed a coil consisting of 130 feet 1/4inch block-tin pipe, held in form and position by four straps (U-cross section) of strong galvanized sheet iron, to which the coils are so'dered, so that the whole can be freely handled and taken out of the boiler when not in use. A similar coil in a wooden tank forms the cooler, and the capacity of the apparatus is about 950 gallons per day-ten hours.

The pasteurizer in use at the viticultural

of the same pipe forms the cooler. The with valuable wines, of the perfect sound due bly the addition the garden form it is asserted form and the hours.

A large apparatus, according to Tarrel, with a capacity of 250 gall is per hour, costs at the factory \$240.

in order that any of these applications. may work with perfect regularity, it is best that the wine should descend by gravity from a supply cask adjusted once fir ad to auch a height above the heat ras to form a proper pressure column, into this supply cask the wine to be treated is pump dias needed. Pumping the win directly int. the heater is a petionable because of the apasmodic action, by which some pertiens of the wine may escape a b quate heating while others are overheated. For the region lation of the flow to the exact temperature desired, a faucet-timbed inside - is interposed between the cask and the heater. it is convenient to have another placed between the heater and the conder, or the receiving cask. The inlet pipe must be so not to the bottom of the h ater, so that the wine moves up card in the spiral, otherwise seemmulation of gas outbook consistingularities. When a color is used, fuel may be saved by using in it, instead of water, the wine that is to be heated and may thus be given a part of its incr ase of tempera-

It will thus be seen that pasteurizing is an exceedingly simple operation, which can be formed by any intestigent laborer who can read a thermemeter and adjust a which the various appearers had to be faucet.

UTILITY OF TASTEULIZATION.

When it is consider to haw great an extent the general use of the pasteurizing quence of which the pomice could not be process can do away with the most serious pressed as dry as is really required for the difficulties under which Caferina wine- best results, nor count the tap could us is makers labor, its importance can hardly be low worked up to their full capacity. The overestimated. Our hot vintag -- ason and graps, supplied to the factory could not i the imperfect methods of fermentalizated scheded at leasure but had to be taken as commonly practiced, rind rio ir wines all red. Without mee discrimination is peculiarly hable to the introduction of respect to kind and even quality. A gonoxions germs, which develop so soon as deal of the stock supplied would, under the the after-fermentation is completed, if not sooner. Pasteurizing will put a final stop to these dangers, provided projer care and tamby have yield divery inferior and uncleapliness is used in handling in in aftermard

wites when very young, and they go to would weigh heavy in favor of the value of long distances and pass through great this method of uniazing our sarplus of alterations of temperature. Once pasteurs gropes that cannot find watery a commodaized, they will stand this treatment without tion. nearly as char as they left the shipper.

One of the most serious sources of comgreater age, they undergo unsound former. tation in the bottles, as they still contain germ food, and possibly germs of all kinds All this is done away with by pa terrizing without the need of sancylic acid and withput injury to the wine.

I believe that when these matters are fully understood by our wine makers and tame 1 17 per cent. ahippers, the pasteurizing of wines before shipment will become the rule instead of the exception. A product shipper, balling the condensed must plus skins over real the haracteristic Zudante) equit will precipint to bree

capacity of this single pipe is 8 to 10 gal mess of which he has the slightest doubt and d wat r, to 24 2 per ent of seed one capacity of this single pipe is 8 to 10 gal mess of which he has the slightest doubt and d wat r, to 24 2 per ent of seed one capacity of loos per hour when the tank water is kept will not propardize his programmy interest thats and O of and I have given the at about 1960; with ten similar tubes and a and his reputation by emitting so simple or permish was fivided at a right bath temperature of 1767, which is admiss and inexpensive a means of inscring their tubes, for a new more it is now a remible for many wines, in a long-flow perfect safety. Wines made with adapter to the fifth of the in Alexander to boiler the hourly capacity would be about precautions may sailt go unseathed, as a traper time of the length of the contraction. 100 gallons—or, say, 1000 galous intended they come from the street casks, but free atment on kip of 72 to 75 hours. even the additional magnetic try three wire provides out of Pasteur's process will, where wines are the was treat to via a comparation of the process. properly graded and valued, generally pay from the biguiting three times from for the lab ranvaved.

ment of our product varishes so ling is sail vistra 11, asual the wine dealer continues to proach and act. It's consider an applicabilities to its upon the maxim that stwine is wine's increase and main secting of the resent his leading with the producer. The come transver grand as William Is he munistre principo is fata to all'in avidual per el y nermo il ricatale el sas a improvement and prigress, whether also man three tanks but in start 11s a plied to society or to wise production, it offer the there i from some existing stands next to adulteration and tistrately, thit, and read lits maximum to spire ing" in barring the progress of the wine in dustry in Conf. rnin.

RED WINE TROM CONDENSED MUST.

Report in Springmont From a State Analyst

In view of the interest attaching to evap eated must and pomisson proserved according the Springmobile process, as opening a market for grap's without the heavy investments required for win res, I think it proper to communicate at this time, the resuits of an experiment mad during the past season, with a barrel sample of the condens d must with joinace sent to the University Laboratory from the Geys-rville factory, by Dr. Springmobil.

It should be stated that the arrangements at the factory wire far from boing alt getner satisfactory, on account of the hise in gotten together. While the condens reworked as well as could be desir doth to was a deficiency in press power, in conseordinary treatment in winers s, and in the absince of past unizing arrang ments, orsound wine. The outire work was therefore conducted under the most unfavorable It is the common practice to ship our conditions, and a satisfactory outcome

material danger or deterioration. If given The contents of the package, at first reat for some weeks after the process, they sight resembing graps pressive, consisted may be fined, if necessary, and will arrive of evaporated must or grap syrup arready mix d with the proper proportion of skins ir pomace, as was ascertained by a special plaint against California wines in the East let rimination. The grapes represented is that they "will not keep," the canse were, according to Dr. Springmula's statebeing very generally the fact that, being too ment, about half-and-half Zinfanda Grat young to be bottled like imported wines of crep and Burgundy. The ri utity of the grape sectanted I have been thable to ase to tain, it was dubtless and a Pin t, but probably Chaucké Neir, possibly Treasseau. The light color of the wine speaks of some such light-finted grape.

The spindle showed the solid contents of the syrup to be 72.6 per cent, and, as tar-

On November sevent outh month after receipt package 33 gal one of mess first noted, and while showing but I for

or the liber invoved.

two there were the liber in the li

ture as will as the 4 property and bouts determined by on as the mark tor tents determined top in as the mark for Done (80), $S_{1} = S_{2} = 2 - i i$, $q_{1} = drawing (fi, 18) Lours later in lactical fine (mass) (condition) with <math>s_{1} = s_{2} = s_{3} = i$.

The maximum tangerstor's even liver respectively (1.7%, 22.7%, and 0), ranched the 2% traces of ty the first two tanks in the in rining of the fourth lay. Aft rith at their important rapidly leaned and the pressing was I no responsely directly disposed 115. 12 Cand 14 Lours, the time surprelinary stirring being the first to occur in

The form utation was second to your malified in one would have suspect it has the mash was not must from from gray s. underg beevaperate but it miscriture to hot for the hand to be ir, and which would or limitely 1 supp - 1 to partize or kitan ferminative germs. Yet evilently here any kind was not lifer starting. T :-> table b low gives the summary rearly t the course of firmentation, is will as the and this fithe wine

The wine was quite light-colors l, the maxim im that being 160, racked on the fourth day. At pressing the tint had already decumed to 12 5 in the first twtanks, and had hardly changed from the maximim of 11% in the third. The cause of this difference is not charms, it disappeared air rward.

In the after-fermentation, also, these wines Is have dinormally, and on February 7th they were racked and combined inc. me sample of 70 gallets, there being no deforme worth notice in the three packages.

At this time the wine show I to the tastbeam as combination of a lyanged vito sity. with the varstimess of the new wine, and its vers merk hastringency was compled with for the quality of the wine.

The next with it was frequently tasted, and the gradual heappearane of the litt ruess first and lower exclusion. At the logistical amountains of the softmort at this trush wide mplite sounds so

A testing recorder June Dan, stees that the bourpet is developing, astrongoney is prin uned, but placent, and ambed. as laterness remaining " M. E. John

As more at error at fisting mid by the writer on July 11th, was rear blash asks Fairly develop d louquet and vinesity sed in grand and screenber, in a mark of un soundness, win , as a what, wen'd sell follow for its age, and of very fir quanty and clean tist , has list countly the litter-

1...+ th. With at the A . . 1 -- Wil to t or to the very akatribult un grörged of

DRAING GRAPLS.

B. M. B. A. William of vil F. . · -1.L 1,-1,-1, 75 1 7 Wash Lints above in large. Hereal none got in digital Massim Logistic resixt of in a share way in a lost year all a veral carl als through a Sim France office. He strang to say, as found to the Wistern districts, a following Montages where they ther was a lack of them, and a goast four assist relatives to purpose. From rerut reputh Mr Both as and that to Ir. I grap s ar with the ents in Sat Face is not coshi, we at to Loud in, and in his pinen had told is a better mark tfirth mitain From . In Luglan 1 they are sa's write lifer all against literats. Mr B in Las off r lasts, groves in his viscity \$12 at a for all their Mission graphs, and is buying and drying them in our apparatuses. Howeverments there to facinity in it avid which paying \$12 a tablerth grays

Mr. Both's experime has tright him that the lest in believe at laying if or the le distribus made by sar along on apbrown straw-L * manage papers on the grand in some. To assert in paper faculty's the gath ring up of the I se grap's and prevents less. In this manner it repures from son to non-lays to compote the drying process, that the grap s are then pack I am out the sacks for singement the paper, bond has its other at an ion-lor district that a somis

Fill, wing this tran. M. B. th. Las Len viry successful and has rich many int of r, aril. his sale mile on the incl grap dustross that to his out a dust out part out has a system your

The Participant of the South And and Su walman and you are to be to ach of an rule vine, the does of who have no su out estable and was has term disapseour. The vines' gin to withrandomasa ritor. L. In Is as is uno salt is the the level desired by the in the south. The most successful remody thus far his extra list the up up the vines as some stary's gent show the hight and burn the control of the rich the control of

ARSENIC REMEDY FOR GRASS

Report to State Board of Viticultural Commissioners, by W. B. Risivo, State Auglyst.

During the summer of 1885 the grasshoppers had made such ravages upon the vines and fruit trees in many parts of the State that the vinevardists and fruit growers were obliged to resort to what seemed al most desperate remedies to save their crops. I refer to the rather liberal use of arsonic, mixed with brau, middlings, and syrup made into a stiff paste and then set before the advancing army of grasshoppers. The remedy proved effectual, and the destroying pests were checked and the crops saved. The question was now raised, whether fruit from vineyards and orchards where this remedy had been used was not poisoned, or at least might not contain enough of the poison to make its use injurious.

At this crisis I was called upon, as State Analyst, by your Board, to visit the district where the arsonic had been used, and to report if in my opinion any danger was to be feared from the use of grapes and fruits from those vineyards 1 immediately ontered upon this bivestigation, going to the vinewards where the arsenic had been used, observing carefully the manner of its application and subsequent treatment. I also studied carefully the habits of the grasshopper, and its behavior both before and after eating the arsenic. I gathered a large amount of material for subsequent chemical examination. I ought to add that I was ever&where received most cordially, and every assistance possible rendered me in the pursuit of my investigation. I also received much valuable information in regard to the habits of the grasshopper from the very intelligent and observing vineyardists.

Two methods of investigation seemed open to me: one experimental, i. e., by taking samples of fruit in large quantities, and from places where the arsenic had been used most freely, and then testing large samples in the laboratory for arsenic; the other involved the considerations of all the possible methods by which arsenic could be conveyed to the fruits and then by observation and examination either confirm or refute these possibilities.

I shall consider this second line of study first. In what way could the arsenic be lodged upon the fruit? The possibility of its absorption by the plant, and its deposition in the fruit, I assume as fully settled by experiments in the negative. I shall refer to this in another connection, and for the present drop it for a simple denial. Could any atmospheric agencies transport it and lodge it upon the fruit? Could winds blow it about and deposit it there? The method universally adopted in applying it precluded this possibility, as it seemed to me. It was applied as thick paste deposited upon pieces of shingles or shakes placed npon the ground. This paste hardened or thickened on exposure to the air or sun. and in no case did it become crumby or powdery, or in a condition to be blown about. It remained a coherent mass upon the shingle where it was placed. The grapes were clean, and a strong lens failed to show any dust lodged upon them. The arsenic does not evaporate or volatilize at ordinary temperature, and so could not condense again upon any near object. No rain fell during the time of exposure, so that water could not, in any way, have transported the poison. As the result of examinations of this sort, I could not escape the poison. Could any animal do it? Could the grasshoppers themselves do it? This was quite possible, and the examination alone could decide

In one or two cases I observed that the grasshoppers, having got into the mass when very thin and syrapy, had afterwards crawled upon the leaves. Their course could not be accourately followed on the leaves, because the arsenic, in this moist condition, killed the substance of the leaf touched, so that a brown line on the lesf gave the track of the grasshopper. Cases of this soit were extremely rare, and in no case could I see the mark of the grasshopper upon the grapes thems lves. If the arsenic had touched them at any point when green, a dead and gnarled spot would have been formed. After recognizing the tracks of the grasshopper on the leaves, great care was taken in the examination, but no second case was found. A theory had been suggested that the grasshopper might have vomited the contents of his stomach, including the arsenic, upon the grapes, and in this way the poison be communicated to the consumers of the fruit. Close observation failed to discover any instance of this. The habits of the pests were such as to make such an accident most improbable. Immediately upon eating the arsenic, he sought the shade. Mr. Goodman, of Fresno assured me that he had watched them carefully, and to every case, immediately upon eating the poison, they had sought the shade, or water, if any happened to be near. A striking confirmation of this fact is found in the location of the dead bodies of the grasshoppers. They are invariably to be found under the vines; hardly a single one was to be seen until the vines were moved, and then hundreds were in full view under a single vine. I watched carefully for dead grasshoppers in the clusters of the grapes; I can only say I found none; it may be now and then a dead grasshopper may have become entangled in the bunches, but I can assert that it must have been a rare occurrence. In some places, I observed a very considerable amount of grasshopper excrement upon the foilage and among the clusters of the grapes. I collected a quanity of this excrement from the foilage, and took it up to my laboratory for examination. The subsequent examination of this excrement showed that it did not contain a trace of the poisou; even when arge quanities were taken, there was no trace of the arsenic to be discovered by the chemical tests. The bodies of the dead grasshoppers, on the other hand, gave large amounts of the arsenic, leaving no doubt as to the efficency of the remedy.

The results of my observations in the vineyards gave only negative indications. As a final test, I picked myself in spots where the arsenic man occu-freely, from thirty to forty pounds of grapes were examined for arsenic. In none did I obtain more than the faintest trace of this substance, an amount absolutely inappreciable, and to small too have any perceptible action upon the human hody. This conclusion, as soon as reached, was communicated to Mr. Charles A. Wetmore, Chief Executive Viticultural Officer, and by him published in the dailies of the State.

Some other interesting and important question still remained to be considered.

If the arsenic should be left upon the soil, what dangers are to be anticipated to

ity, and hardily the faintest possibility, that possibilities are there of the arsenic being any atmospheric agency could transport taken into solution by the water and then entering the springs, wells, or streams which may be used for domestic purposes? It would also be a matter of interest to enquire whether arsenic is known to occur in any appreciable quantity in arable soils; are there any well anthenticated instances in which arsenic is known to have been ap plied to a soil by accident, or otherwise, and with what result? Does arsenic occur in any spring water, or in any inineral spring that has been used by man for any period, and with what results?

Volh found a very appreciable quantity of arsenic in the boiler scale of steamer that ran from Cologne to Muhlheim, on th Rhine

Walchuer, for many years member of th Mining Directory of the Grand Duchy o Baden, had occasion to investigate the iro ores of that country, and found that the almost universally contained arsenic in small quantities. As these ores were no doubtedly deposited from mineral springs it occurred to him to test the deposit of iron springs still in existence. He found thus these springs, or rather that iron deposit from them, contained arsenic. He then extended his observation to some of the celbrated mineral springs of Germany. He examined the deposits of the iron springof the Black Forest (Griesbach, Rippolsan Treinach, Rothenfels, and Caunstadt), and also of Wiesbaden, Schwalbach, Ems. Pyremont, Lamscheid, and of Brohlthals, n-ai Anderasch. The iron deposit of those springs all contained arsenic and other metals, and it is supposed that some of their medicinal properties may be due to this fact.

Walchaer, having called the attention of chemists to this occurrence of arsenic, further investigation showed that its presence had been overlooked in very many cases. He began the investigation of soils in this neighborhood of Heidelberg, and found abnadant and clear evid-ace of the pres ence of arsenic in those ferruginous soils. Professor Will, iu a very careful and ex haustive analysis of the springs of Rippoldsay, confirms the statements of Welchner. He found very considerable quantities of arsenic in the deposits from these springs.

Professor Buuseu, found that twenty-five out of thirty-eight mineral springs, in the Grand Duchy fo Baden, contained arsenic. Many other mineral waters are known to contain this substance. It seems almost impossible to escape the conclusion that arsenic is widely distributed in nature, and when proper methods have been taken to discover this substance in connection with iron deposits, it will almost certainly be there.

Ars-nic is known to be present in the immediate neighborhood of many metallurgical works.

An analysis of this soil in the neighborhood of the Muldener Hutte in Freiberg by Stockhardt, showed the presence of arsenic for a distance one thousand yards and more from the works - It could not well be otherwise, when thousands of tons of ore have been roasted, which contained arsenic. This substance is almost entirely expelled, and passes into the atmosphere, and in a short time is brought to the earth again. in the neighborhood of the smelting works.

The presence of arsenic in soils is not a new discovery, but has been a practical problem for generations. This problem has been the subject of scientific investigathe conclusion that there was no probabil- the vines, trees, or future crops? What tion, especially during the last thirty or the plant that injury can result from the

forty years, and the most important points well considered.

Stockhardt remarks, in regard to the action of the fumes of arsenic in the neighborhood of the works in Freiberg: "Even in the near neighborhood of the arsenic works, at a distance of sixty to seventy yards, the fields everywhere were cultivated, either tor meadow or forage crops, und field crops, did not appear to be specially affected, comparing similar slopes and similar soils. Among the grains, the onts seemed to be most sensitive to the fumes, etc."

This subject was taken up by Dr. McMutrie, the chemist of the Agricultural D partuent in Wa-hington. Paris green had been used at the time in considerable quantity for the potato pest, and the quesion of danger to the vegetation was then aised. He was unable to find any arsenic to the tuber of the potato. These experinents were continued, and varying quantities of arsenic, in the form of Paris green, arscuite of potash, and arscuiate of potash, were used. H · came to the conclusion that nine handred pounds of Paris green to the acre, four hundred pounds of arsenite of potash, and one hundred and fifty ponuda farseniate of potash, might be applied without injury to the plants.

I will not attempt to give a full synopsia if the literature upon this subject, but will content, myself with a brief summary of the most important recent investigations.

Dry arsenic sprinkled upon the foilage of a plant has but little, if any, action on the plant. Fumes of arsenic under a tree, or in contract with a hardy plant, seem to be entirely without action on the plant A solntion of arsenic is a poison to the plant, and all plants are quickly affected by it. Very small amounts may be absorbed by plants -succulent plants being most sensitive to the poison-and but little change is observed. A careful analysis of such plants may show a trace of arsenic. Jager found tests for arsenic in certain dried plants which had been grown in soil containing arsenic. Von Gorrup-Bessanez detected the presence of this element in one hundred and forty grammes of dried huckwheat straw, grown in a soil to which the arsenic had been added.

Professors Nobbe, Baessler, and Will, in the Landwirthschaftlichen Versuchs-Station, 1884, have taken up the action of arsenic upon plants, and in a prolonged and exhaustible investigation, have come to the following conclusions:

- 1. "Arsenic in solution is an exceeding ! active poison to plants. The addition of one millionth to the culture solution produces an appreciable disturbance of growth.
- 2. "The elements enters in very small quanities only into the plant; it is impossble to introduce an appreciable quantity.
- 3. "The action of arsenic proceeds from the roots upward, whose protoplasm is disorganized and derauged in its osmotic action: the rootlet dies without growth.
- 4. "The parts above ground show the action of the arsenic first by strong wilting, recovering slowly, followed by death.
- 5. "By obstructing the transpiration ie., shutting off the light, placing in a warm, room, etc.), it is possible to maintain the growth of plants in an arsenic solution for a time, without, however, removing the poisonous action of the arsenic, which asserts itself later."

All investigations seem to agree in this general conclusion. There is no danger of arsenic being taken up in such quality by

use of the plant food If very much or even an appreciable amount should be taken up by the plant it must surely die. The spronting of seeds is destroyed by so-Intions of arsenic; so that where there is a large amount of this substance in the seil it simply becomes barren.

The danger of contaminating wells will appear small after what has been said upon the wide distributing of this element in nature, and its occurrence in certain mineral waters. We have but few experiments to test the power of soils to retain arsente. Von Gorrup Bessanez used a very small amount of soil and retained 4 15 per cent of the arsenic. It may safely be presumed that a ferruginous or highly calcareous will would practically r tain the whole, so that the water filtered through it, although it might be mixed with poison, would only contain a mere trace.

A few words of caution should be added to what I have said in regard to the use of this v ry deadly poison. It is a poison, and this must always be kept in mind. It should be gathered up and not left upon the land. If a manfacturing chemist is near he can easily convert it into pure arsenic again. If boiled with wheat or other grain it may be used for poisoning aquirr-ls.

W. B. RISING.

State Analyst.

ERENCH WINE INTERESTS

Adolph Houssave writes from Paris to a Chicago paper that "the wine interests of France are in a bal way. The vintage of 1886 was the poorest in thirty years, both in quantity and quality, but the vintage of of 1887 proves to be poorer still. Those whose vineyards have not hen devisted by philloxero, and who therefore have good wine, will get very high prices, but most wine-growers will have to face serious losses. The districts that are worst off are the Gironde, the Charente and the Charente inferieure. As a result of this, the balance of the foreign trade is heavily against France. Instead of selling wine to others, she has now to buy it for her own nse. Ten years ago more than 50,000,000 gallons were annually exported, while the imports scarcely exceeded 5,000,000 gallons. What is the case now? Last year France sold only 54 000,000 gallons of wans, while her purchases amounted to the enormous total of 260,000,000 gallons She actually imported half as much as she made. The worst feature of the case, however, pertains not to quantity, but to the quality of the wine. Some 31,000 tons of sugar were need last year to fortify the product of the wine presses. There were during the year imported into or manufactured in France no less than 120,000,000 g dtons of a mixture compounded from raisins, eider and the refuse of the wine presses. This has been doctored and sold as wine. There have also been imported some millions of gallons of crude spirits, manufactured in Germany from potatoes and beetroot, This is treated with drugs, and put upon the market as pure grape brandy, when it really contains not a drop of grape

Twe Anglo-American Times credits Arpad. others estimate the California wine crop of this year at 30,000,000 gallons

ANNIAL REPORT OF GEORGE WEST

Commissioner for the San Jeaquin Is str. t. 1857.

To the BOARD OF STATE VITICULTURAL COMMISSIONERS -Gentemen Arrays wol the progress made in viticulture in this district since my last report is very gratifying. Twyears ago, the only counties that mid-any pretentions toward grape growing were San Joaquin and Fresne while now the greatest interest is taken in viticulture throughout the San Joaquin valley, and there has been an imm use increase in the act agboth of wine and rusin grapes, notably in Fo spo county.

SAN JOAQUIN COUNTY

It has been impossible to obtain an exact estimate of the acreage planted in vines in San Joaquin county, for the reason that the lands were long since divided into comparatively small holdings, and as they are almost univ really fine, and nearly all well adapted to grape growing, a great many small vinevards have been planted, the exact acrong- of which has been impossible to obtain. However, I consider two themsand acres a lowestimate; and 1 am pleased to note in this connection that pourly all the vineyards that have been planted in the very choicest varieties of vines, the proference for wine grapes being for the Tannat, Cabernet Sauvignon, Cabernet Macaire, Petit Bousch-t, Tross an and Mistaro, for red wines, the Folle Blanche, White Prolific, Boal and Colombar, for white wine and brands a Fortable grapes planted.

I would urge the planting of resistant stocks in all cases, the extra expense being amply repaid by permanency of the vinevard secured thereby.

PROSPRIETS OF INCREASED A REAGE.

It is probable that the coming winter will see a large increase in the acreage of vines. as the profits derived from the industry in this section are very satisfactory, the yield being phenomenally heavy, and the quality of the product excellent. San Joaquin county is so situated that both sweet and dry wines can be produced. No vineyards are planted in raisin grapes, for the reason that the season for drying is so short as to make the venture hazardous

TABLE GBAFES

Table grapes of a quality un-xcelled are produced on the black land- around Stockton, and a considerable acreage is devoted to their culture. These grapes are mostly shipped to the Eastern markets, and the profits of the growers are very large. I look for wonderful developments in this branch of the industry. Lands can b purchased at from \$50 to \$150 per noraccording to location; and many of our wheat farms will be subdivided and sold at those figures during the coming winter

No irrigation whatever is required for the growth of the vine in most parts of San Joaquin county, and where it is practiced unnecessirily it is at the expense of the quality of the product.

STANISLAUS AND MERCED COUNTIES.

Stanislaus and Merced counties are just Haraszthy, the great Hungarian-California awakening to the importance of grape growwine grower, with the statement that pure ing to the future developments of their California wine can be laid down in the lands. Both these counties contain a eastern cities as cheap as beer. He and amail acreage of old vines and a more

in both countries, and with the better varieties of vines, now being planted we may reasonably expect an improvem at in the product. Rusins of excelent printy was undoubte By be produced, as the warm by nights would seem especially adapted to the curing of the grape. But of these countries contain countless are of fire land, all of which has been living to wheat growing.

S veral irrigation who measure assure to befine shape, and a large amount of can will some bophs of on the mark ? probable that both Statislaus at i Mercountries will make the same rapid a bestor m at that has been made in the more s othern county of Fresho.

PERSON CHINTY

No county in the listrict can show such wenderful development in so short a time as Fresner. At the time of my last report, the acreage of this county was placed at sev is the resaid five hundred acres, while now, it will be soon from the statistics appended to this report, that nearly fifteen thousand acres are planted in raisin and wine grapes, of which nine thousand five hundred acres are in raisin grapes, the balance in wine grapes. The profits from both branch s of the industry are satisfactory to the growers.

The vintage of last season amounted tal cut one mills in five hundred thousand Franc, Mondouse, Verdet, Malbock, St. gailons of wine, hearly all of which has been sold at remunerative prices. vintage of 1557 will be much heavily, as a large acreage of young vin s will be in hearing. A large part of the young plant the Black Prince, Tokay, Emperir and of Fresho county is devoted exclusively to Black Ferrara are almost exclusively port, sherry and brandy varieties, it being generally conceded that the San Joaquin valley will excell in these products. Fresno county will undoubtedly be the banner raisin-producing county of the State, the cilmate being exceedingly well adapted to the curing of grapea.

THE BUSIN INDUSTRY

The raisin back of 1886 was about tw hundred and fifty thousand be tos, and the amount will be materially increased this season. The profits of the leasiness are large, and it is one particularly attractive to people of timited means, the helivy invistments in cessary to the wine business not bling required. Many growers sell their products to the packers in the sweat boxes, and realize a handsome income from a small acreage of vines. An immense number of small vineyards will be planted this winter in raisin grapes throughout Freeno county.

A few years ago, the only vineyards in the county were in the immediate vicinity of Prisno City, but lately large tracts of land, both north and south, have been brought under irrigation and planted in

The vineyards around Minturn and Maderia, in the northern part of the county, are devoted almost exclusively to wine growing while around Fowler, Solma and Kingsburg, on the scain, the preference is given to raisins.

TELAKE COUNTY

Tulare county is at last r alizing the fact that she has countless acros of fine land well a lapted to grape grawing, but it is only within the past three years that any important plantations have been made There are probably eight handred agree of vines in the county principally in raisin grapes, and as the conditions are similar, considerable acreage of vines of recent her products will undoubtedly equal those plantation. Good wines have been made of Fr. suo in excellence.

Kern county also has pointed a series . able here ign from yard in the past of y are, and is a horay, the attended are against the whole See deep revelly at and into the wind the control of the second the substry of 2 of 1. The strip strip strips in atlanth iv to fir

Inchant - 1 Labbary raise the tr be has are to front a wines out of the rest of the outh they are properly to them the Tast would be mader as

R spetfuny solumited.

C mansach of oth SaJ , ... Detrict

EASTERN PROTIES IN GRAPES.

Some a of manel Wood at Non York be serves a writer in the core of a coden, seems admirally all pt. 15 are on with a and thus far without it drawlaks of 1 ease. A single township is right to have over 2000 agrees in vines, and the nor age planted and april is reported to have increas dim a me actions, fr m 150 to 200 per cent, which will hair's indicate production within the next three years. In reference to the presticn of pay and everproduction, the answer is in the restrictions is double the in may not in grapes at two ents a pound than in any other rejethey can put in their 'an is, and at that once. consumition would mercas, and the markits will take them as leven if the product was quadrupled." A chim meal ides to our view. Einciding the perpertient graph sis a thig politically a complished. We have to a assured by some of our New Jors y growers that they best we that chimential distrine. W regrit their illas if profit are not more elevated. The farming and fruit growing tusiness should pay their followers as great a profit as is yell big any other melustry, and it is not be used that at present it fales far, very far, short of it If even these prices for grapes shall bee me the rule, many shoul gr wers, the writer included, will got grass

DELLIERIOUS SPURIUS

A letter recently appears I in the Society none calling attention to the introosing importation of potatos spirits into the United Kingdom, the increase for the first six mouths of the present year having anounceed to nearly 400,000 goldes. As this spirit is chardy used for in the firegoing place, it would, at first sight, appliar that its increased importation was a sum of improved trade, and should come querty be regarded with satisfact to that all some sage sted, there is a growing titling among the I were course to us thy sate I spirits as a t v-rage, the mutter assume a less favorable aspet. Few firms of alcohol are so mis- hier us as petato spirit, as, if used persistintly it produces insanity. It is a great pity that not means have as yet been found of making spirit for heating purposes obsciutely undrukable even by the most harden dispers but perhaps a methic, nay vet be dine



SQUED FORTH GHTLY CN FRIDAY MORNING BY

E. C. Hughes & Co. . . Proprietors Office, 511 Sansonic street Posteffin Box, 2366

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WOODLAND, Yours	EIBG
HONOLULU	1 , 141 lp , 11

FRIDAY. SEPTEMBER 28, 1888

TEETOTALEERS do not have all the lest of it, remarks the Wine and Spirit mustb. when statistics are forthcoming as to the effect of alcohol upon the human syst m. A report has recently loon issu d from Dr. Owen, Secretary of the Investigating Committee of the British Medical Association from which we extract the following: He examined into the history of 4234 deceased lives of twenty-five years and upwards, and found that the average age at the time of death was, in the case of-

The habitually temperate62:13	year
Careless drink rs 59.67	
Free drinkers	1.4
Decidedly intemperate 52 03	, 4
Total abstainers	, ,

It will thus be seen that the total abatainers show the worst average of life.

NOTICE has been received of the formation of a Dried Fruit Association for California, which will be of much assistance in aiding the grower to dispose of his produce. Although the Association will act for non-members, the information of murkets, etc., will be available only to stockbolders, who will at all times have access to the records. It will, therefore, be to the advantage of finit-growers to give the new enterprise their active support. The capital is fixed at the nominal rate of \$250,000, in 250,000 shares of \$1 each. The officers of the Company are-A. T Hatch, President: H. Weinstock, Vice-President: Wm, Bramhall, 8 cretary, and the Bank of California Treasurer.

THE SUGAR Convention can hardly be considered a success. Although the majority of the European powers have signed the proposed treaty. France, one of the heaviest continental producers, declines to enter into the arrangement. The action of this government has all along suggested a disinclination to look with favor on the contemplated changes, while never directly refusing to take part in the proceedings. Even now there has been no refusal to beginning, a desire is expressed to lay the matter over another year for consideration

The Following is a summary of latest miets in Spain are on the whole most enmatmity

The fine days were actively availed of to top off the leafy branches of vines, and sulphur th in as much as possible, so as to destroy or ty vestige of mildew attack, The vintage will not be completed before the 25th of September At Charentes, while the fin waith a lasted, good headway has been made in the vineyards, but the raits having set in again, anxi-ty about the vintage revives. The mildew has made such ravages in the Maine-et-Loire during the rains, that subsequent to atment during a week of snushine has come too late, and in our immediate vicinity we now see a fine crop that was in prospect, dwindle down to a mere nothing. At Augers, on the contrary, the vintage outlook is fair. In the lower Buigundy, or interval of bright days have come too late to repair the damage resulting from the unseasonable weeks we have passed through. Prospects of a fair yield at Roussillou, have improved somewhat, vine diseases having done hardly any damage to speak of in this region; a return to steady clear weather would still find us abundance combined with fine quali-

At Cette, the vintage outlook has improved. New Mineral and Villeneuve grapes for table use, have just been shipped to Paris; they are in fine condition, and if our general yield approaches them, there will be no reason for complaint. In Southern France, all that is required is a return of the warm days we had during a week to still secure us a fine vintage despite the many drawbacks we have had to contend with.

Exposed as Portugal is to the west winds which have this summer been prevalent and have overwhelmed Western Europe with more rain than has fallen there since May in any season for the past twenty-five years, we have had altogether to much of it, and too little sunshine. The consequence has been an extensive lotting of grapes on the vine; we shall, ther fore, in any event not have as exuberant a yield as we had in ust bring about a radical change.

Although, taken as a whole, this summer start haveing mostly been faultless. They and one dry goods, have developed well and the early grapes gradually approach maturity; Portuguese have, as usual, done best. As September is the month that makes the quality, tolerable good weather during us course may still do wonders. Not that we dare expect anything extra in point of quality, still it may yet turn out quite acceptable.

Grapes have so far this month suffered neither from hailstorms nor from vine disstanding vintage prospects continue tolerexpected, but a normally warm temperature done splendidly.

Advices from the various viticultural dis It acts.

the few thunder showers now and then in-temperature, at times too low, it cannot be tervening, were well calculated to hasten defined that the general crop prospects are all that could be wished for.

> The vintage in the colony of Algeria is going to be an unusually early one, but it it hoped proprietors will not hurry their new wines to the market to soon. In the neighboring French protectorate Tunis, viticultural is about the only thing that thrives, and is likely ever to prosper. It is making good headway: Frenchmen and Englishmer. have taken it in hand, there are both money and experience at its disposal.

While vintage prospects are as a general thing not but in Italy, despite the vicissitudes of temperature in the northern an central portitions of the peninsula, th general situation of the wine trade as well ar of viticulture in the south in particular pases through a severe crisis.

FROM A TECHNOLAL WINE paper we glean

the following statistics of taverns for th sale of distilled drinks, which, with relation to temperance facts in count r distintion to wing consumption, are of interest; Bukornia. . . 1 saloon for 283 inh dutant-Moravia 293 4 = Galicia..... 335 Silesia 361 Boh-mia 41 519 .. Tyrol 631 6.6 .. Trieste..... 726 6 Garieia..... 735 Carinthia.... 6.4 817 . . Styvia..... 854

6.6 Lower Austria 1140 Salzburg 2974 Ver Artberg . 6.6 3976 4.6 2963 Upper Austria Carinthia..., 49,915

4.4 11 905

Dalmatia....

Istria

Where wine is grown and abundant in th - Austrian Empire, the whisky tavern has little chance for flourishing.

912

, ,

San Francisco, September 22, 1888.

The Bradstreet Mercantile Agency reports nine failures in the Pacific Coast 1887 and 1886, nor will the quality come States and Territories, for the week ending up to standard as a general thing unless yesterday, as compared with trusteen for September and what there remains of Aug- the previous week, and thirteen for the corresponding week of 1887.

The failures of the past week are divided has brought an excess of moisture, the vines among the trades as follows: Two butchin the German wine regions have done toler pers, two grocers, one general merchandise. ably well, the formation of grapes at the one saloon, one planing mill, one saw mill,

THE PROPOSITION to dry a large portion of the grape erop, adopted by growers in the Livermore valley, is likely to result in a profitable business, judging from the tone of the correspondence now going on between the agent on this Coast for the firm of Ari-l. Meinbath & Co., of Kansas City, Missouri, and Mr. Wm. I'. Bartlett, of Livermore. The Eastern firms offer to eases, and, the frequent rains notwith handle all the grapes grown in this section, and well-dried at 2 4 cents per pound. ably fair in Hangary. A large yield is not This price is the equivalent, expense of packing and stemming deducted, of from may still secure good merchantable quality \$14 to \$18 per ton for the fresh grapes, from now to the beginning of O tober, a according to quantity. It is said that the join the Convention, but in accordance thing very much to be wished for. The offer has been accepted, and that Mr. J. with a plan of delay carried out from the blue Radatka grape in this vicinity has O. Allen, agent for the purchasers, will shortly strive at Livermore to make con-

MAGEE's Real Estate Circular, issued for reports from foreign vineyards in Bourfort's couraging; vine diseases have been of little. September, says: Although the real estate Gr war: Warm western has favored the occount, and despite the many difficulties market was reckoned a quiet one in August, growth of grapes in the Grande Vineyards, arising from the continual fluctuations of nevertheless a very full business was done in it. The total number of sales recorded was 441, of the value of \$1,877,419. These figures do not by any means, either, represent the total transactions of August. Not to speak of the Lick sale of a million and a quarter, not yet of record, there were at east fifty more sales, of the value of over \$520,000, which are not yet closed. In some quarters it has been stated that, in consequence of the dullness of the late spring and summer months, prices had declined. We would at once note the reduction if it occurred, but we know of no such reduction anywhere. Holders for two or three years have been so accustomed to advances, that stationary rates are looked upon as a decline. With September the fall business opens. The fall and winter s asons-say from first of September to the middle of April, are always the most active in the real estate business in San Francisco. The nearness of the Presidential election may restrict activity, but will not prevent a good real estate business from being done.

> AFTER AN experience of over eight years, he business of the Sonoma Wine and Brandy Company of New York, has inreased to such proportions, that much larger premises were required. The firm has therefore be a forced to add to their storage capacity by taking in the adjoining building, No. 3 Front street, which has been connected with No. I by a large archway. This gives ample room for 78 casks which range in capacity from 1700 to 3500 gallons. This company is agent for the brandies and sweet wines of the wellknown vineyardists, George West & Son.

THE FOUR principal wine-makers of the Glen Ellen grape-growing section of Sonoma county have decided to form a combination of their own and will bereafter make their wines at the two points nearest the Santa Rosa and Carquinez Railroad and ship it directly East. The members of the combination are Captain Drammond. Arthur Macartury, Lawrence Watson and Mrs. K. Warfield. They represent about 150,000 gallons of the best wine in Sonoma, the product from French and Rhine cuttings.

THE SANTA CLARA County Viticultural Society held their regular session last week. Sugg stions were made that it would be well if the Society would encourage the making of an exhibit of the county viticultural products. Considerable discussion then took place on the condition of the market and prospects of the fruit crop. The gratifying statement was also made that producers were being offered \$13 per ton for their grapes.

WHOLESALE MARKET.

Quotations are fir large lots to the whole LACIDORNIA RAISINA

Halves, Quarters and Eighths. 25, 50 and 75 cent . higher respectively than whole box prices.

Lond n Lavers, choice per box ... Seedless " per 20-th box....

" Sultanas, unbleached, in boxes, ≥ the bleached, "

CANNED GRADES. Grapes, Muscat. 21, 2 ft.s. \$ 1 40 \tilde{g}\$ 1 50. Galls. 4 50 to 3 ft. tins 2 25 \tilde{g}\$ 2 45

Dried Grapes, per lb, 3\tilde{g}\$ 3\tilde{g}\$

SENSIBLE SUGGESTIONS.

JOHN H. WHEELER, Esq., EXECUTIVE OFFICER STATE VITTOPLETERAL COMMISSION.

Dear Sir: In reply to your circular I must confess profound ignorance as to the questions it propounds. I have been here only a month or so, and possess merely the meagre knowledge of the culture of the grape the East is apt to bestow, However, I am very anxious to learn; and if you can spare me exough of your valuable time to inform me where I can procure a concise method of the newest and best mode of treating the vine, as well as the kinds host adapted to the various purposes, I would consider myself under deep obligate us to you. I am almost totally blind, but listening with the keenest interest to the proceedings of your last meeting, which my children read to me, I agree with those who advocated an intimate co-operation, but see no salvation in the establishment of a bank. My experience has taught me the atter a hishness of such institutions, which universally devour those who fostered them. Some day I may, with your permission, lay before your society the detailed plan for a close and strong union of the viticulturists. but shall confine mysel, to-day to a few general hints.

The Union ought, if possible, embrace the entire fraternity. It ought to have an executive board, to which the members should submit Implicitly. A moderate admission fee should be charged, to be spent in securing a large central depot here and at some convenient place East, who nee all movements in that region could be directed. A few salaried officers should superint ad all local as well at general shipments, which ahould be uniform and made on such road or roads as would grant the most liberal rates. The wines shipped from here ought to be inspected by the officers of the Union. and all those naworthy of its reputation rejected. A yearly fee should be charged all the members-in proportion to the acreage owned by the members. The shipping should be done in winter, in lots of -- sav, i a thousand barrels at a time; if possible, in large trains chartered for that purpose, to secure the possible cheapest rates large number of agencies should be established in the East, to which the convey over each par to local at a corrately. could be dispatched without delay, to receive such treatment as the case might re-

Such a scheme could be easily executed provided the members of the Union could and would rise above that sordid selfishmess and individual greadiness, unfortunately characteristic of the majority of our race. If it is not carried out, if the business is continued in the present desultory and shiftless manner, it r quires no prophet to foretell the gradual decay and final cessation of the viticulture of California. We should not look to the support of the State. which, I am sorry to say, is generally blind to its best interests, but seek our salvation in a co-operation void of the objectionable features now generally tainting trust and corporations.

Begging you not to criticize too severely the words of a well-meaning supporter of the good cause, I sign myself. Yours since rely.

RUDOLPH LEONHART, SE. FERSNO, September 23, 1888.

LATEST NEWS from the wine-making districts cannot be t rimed as favorable as it might be. The low percentage of sugar gives much trouble in fermentation. This is especially the case with the Zinfande I.

RESPING PRESH GRAPIS

C. A. Groon, in an Eistern wine paper. in discussing this interesting subject, a 38 If you have a cool, dry colar or findroom, and the best keeping varieties, the question of keeping grips is a surj one. At the great vineyards the great are brought in from the violevials of shallow picking boxes, hilling parties forty pounds, which is ster 1. the other in fruit houses and lift their sai til wanted for market in other pair -Months after they come out is to show when picked. It the room is very fing or the grapes are plus 1 in ? deep boxes, they were to or? skinned grapes, like the Agawam I . bella or Cawtiwba, keep best, who en h tender-skinned varieties as the Concord are the poorest y i I have kept to confup to January by packing in dry see lost in market or bushel baskets. A simple method is to place grape boxes between havers of grapes, as you pick than or shocks of paper. This provides the close ers from pr ssing against such other toclosely, thus preventing mould and decay. Handsom clusters ar pres real by enting a pice of the viae with it, delplacing one end in a battle of water also by covering a stem of the cluster it the point where est, with wax R in all too avoid too dry, to clamp, and to warm rooms, Grap's should be kept a near the freezing point as possible, and not freeze. While immatur grap some a ways destroyed by freezing, Patrick Burry says that these fully ripered are not dis troyed. He has had up. Delawares for z without injury.

L. P. Bie kept Cantiwba, Isabella. Diana and Iona by picking chards and dy, using grap sets ors as not to handmuch, removing all may rise the rise and placing in clean, dry earthern pars, in layers a bunch do to and filling the or n this way. Place a double sheet of paper over the top lay r and jut on the ad-Strong, unbleach d'mislin is passed entirely over the adjoint of the pir, covering has fully dried and bard and the pars are buried on a day knowledge and the action of the frost, a stoke boing pro-

THE MISCAL GRAPI

The superior quality of the Muse 4 gr 1 says the Reer D, is becoming no remainevery year. Cloverdade Climite is parties. larly adapted to growing this variety, co pecually so in the footbills in the vicinity of town. It gives additional flavor and produces more sugar which are advantages in its favor. Bosides being toyon's adapted to the growing of this five. table grape, an animated mark tas bar opened up at every dear. The extension the milroyd to Ukude and then on to L. reka, opens up a vast territory which can not grow the Muscat grape, and the demand from that source will take all the grapes that can be grown here, and at prices that will be very remain rative

This has been a very bad year for vi yardists, as the prices ranges from \$50 \$12 for Zinfandel and good win graps However, the Muscat variety s ld for 720 per ton. When prices are again restor : the Muscat will raise in proportion, and will always stand among the high st priod by Equilibrius a but to the

market will be open dethrough the North lend is. Its taste and oder are frequently ern States and Territories, a renefrme producing matry, it I dialy fruit times is as districtly the ign that and notably will be formed in Senema county in sees by the small boy so often redicted by the son for Listern slipment. The Mose's grape to the of the lost shirters of and of the most time to find a world - f till say that that ... nest probable future. It tends and vicinity, with or land the foothers. But purchased from SIS to Stope

AWARDS FOR MINES.

in li - - Al lor 1 it in the

Best on realistics of the cond. s and we, so H. W. Crabberton ger of the

Bist Iransiy over or a year Subbly +20

B silitudy one v r

Durante W. Henselmann and Co. Bost Cauth rule port wine H. W. Challi.

Best white with the Ri shit. F 11 .1. 1-I. h & Co., Sin Transiste, Sat.

Bist claret wine ever of a year far I. F. C. H. Logal, N. v. L. Cry --Best of two of very it Cd ruet M. M. 1 stor, N q v. 510.

Best sorny was M. S. Novies, Stories

Three places of a little adjusted ... Charly Suprin tender La Research and the the write polymorphism paper of bounder it so that the expects we must the fest were unfamiliarly with the makers have .

WINE MAILBRIDA

I seems I was on the work says the A section, while we apply the term reserves. to each products de wine and lighter, y as a mattir or cloimed and gistrasacross, the application is not only prosts that was happy shares we and golderwood the process making $\langle r\rangle \log \tau / \langle r\rangle$ is of possible, in roth a conand gy, and cooly approaches il many The fruit ching a in texture, but mir. s for and I sontrous the stoch is no in nol into glue se, minute quantiti s () hydrosearb as are broken into the compound others and alsolods, which make the flavor and bonquet and many me ri us safest messare broken down and distreyed So, in the aging of a M intract whisky or bready, there is a the sithe texture, or, to use a more positive term, the specific gravity. A in cross poamount of 2 rm is notice rate of the gluesse, so Topontities of the festival are broken into there composits a page in d others and collect, and there is the ar for or distroy do this now y the scenario imagination but is t into I also us of literal time

dale will be on the direction, did then the court of digestion, producing serious disreposition in at heat disagreeable it honesist and paragrapher. Unripe wines. and by as a tenancer a corresponding inthe new problem is a second type system. A green" Dorde oux or Burgundy freto ally trees vorming, fresh cider and deather, raw whisky, gas-· 1 - ntents - Such goods are never I by the commuss ur, but only by the the root. It right so but little knowl-326 of layers to discriminate heand a find push between ripe and infeing wines and highers.

Sugar Quotations

or or the Second for the ry proceduated Spring r 27 f Car . A Pat Cub., Sac. Altrief et 7 4 . L. P. Island, S. e. living Pauland Society Granulated, S., C. Efection is Circle A. Seco, Extra C. to the C. 7 see Star Drips Syrup, on blds, We lift do, 321, . 5 gall kegs, Try 1 2 of time 47 to per gallen,

Pir ast of the Amate in Sog or Refinery dale i Soptember 6m: Lytra Fine Cube, in bh's $S_{\rm obs}$ Circle A. Crushe I, $S_{\rm obs}^{\rm ad}c$. Fine Croshed Soy. Powdered Soye: Extra Fine Powders i Says Dry Granulated, Star; XX Dry Grant ated, So, e. Confectioners' Cir-Is A. Sc. Extra C. 75, e; Golden C. 67, c; American Golden Syrup, in bbls, 30c per zalb-n.

Grapes as Food.

It is now a stooded by selectists and well is formed men, in all professions, that, as feld for human bings, there is nothing in the veg table word superior to graps, and they not only give strength, endurance and viv: ity to these who regard themselves as will, but pistore the sick and debiliated to health, when eat a freely during the vintigs was as of the year, in the vineyards, r fresh from the city markets. It is also c will established fact, in grape r gious, of the large number of girls who work on ager que continuously throughout the which is a state of the state o from Somether to Doember, or liter, In this hafe on his test waity jounds. o i a sy who come from the cities, in habat I halth, return to their homes,

lon ins month ending July 31st, the total value of imports of merchandise into the United States free and dutable ans \$50,318,627, against \$50,593,226 in Home same a to 1 of 1887. For July, 1888, the find yours of exports of domestic : hard, was \$42,005,616, against Spira (January morals of 1887)

THE NAME VITA VALLE CO., Las been inquert lach as problemek of \$600,000, A latter 6,000 shares. The directors II . . . in B. rolel, Darrel Titus, Chas-& to H was hotels. Howard and P. W.

The TOTAL San Transisco priors for it as 6 ins Bose de Peru, 30 a Mass at the per box. Malvoise, To wite grapes per bit, \$150-20. On the event of the range of big., formed eask of the control with the extended to most some Eastern read which house. In the design of the Pacific Cast Clever forth a Unity from a distributive of the Pacific Cast Clever forth a Unity from a betteriously different pacific Black Hunters 20th 40c.

Commissioner for the Sonoma District, 1887.

TO THE BOARD OF STATE VITICULTUBAL COMMISSIONERS-Gentlemen: The undersigned Viticultural Commissioner for Sonoma District, which includes the counties of Sonoma. Marin, Lake, Mendocino, Humboldt, Del Norte, Trinity and Siskiyon, herewith submits a report of the grapegrowing interest of said district.

Since making the last report, there has been a large increase in acreage, and a marked improvement to varieties of wine grapes.

QUALITY.

We find the quality of our wines very much improved as the vineyards age. The old Mission grape, that years ago made very harsh and rough wines, now produces from the same vineyard wines which would not be recognized as Mission; these wines are now mild, soft and agreeable in taste. There is no doubt that, as the vineyards age, we will be able to produce as good wines as those from European vineyards.

We must, however, look to the hest European varieties of wine grapes for the future fine wines of California, it having been thoroughly proven by actual experience that the fine wine grupes of Europe preserve their best characteristics in California. I would recommend to all those who intend setting out new vineyards | thoroughly resists the phylloxera. Further, that they plant only the choicest European varieties, as these varieties are now abundant enough to be obtained from almost any of the vineyards throughout this district.

SCNOMA COUNTY.

According to the assessor's report of Sonoma county, there are twenty-five thousand acres planted in vineyard, aggregattheir superiority for fine wines, and the country lying between the Sonoma Valley, Santa Rosa, Healdsburg and Cloverdale, has a well-established reputation for fine quality in grapes and wine.

Experience has taught that the billy lands of this district are specially adapted to the wine grape. In fact, the same rule applies in California as in Europe-viz: the hest wine grapes are produced on hilly

YIELD OF WINE.

It is well known that in the famous vineyards of Europe the yield of wine is comparatively small. It is not claimed that the vineyards of Sonoma District yield so largely of grapes as other grape-growing sections, but we believe the future will prove our wines to be of superior quality. AGING.

does not improve after two or three years, and that the wine should be drank by the time it is three years old. This advice is calculated to deter people from holding their wine to age. The fact is, that California wine improves by age as much as

It has been claimed that California wine

any other wine. However, the wine for aging must be sound and well fermented. My experience is that wine is not a good and wholesome drink until it is two years

VARIETIES FOR IMPROVENENTS.

old and over.

As a greater portion of our vineyards are planted with Zinfandel for red wine, I would recommend for improvement in quality, grafting in, say from five to ten per cent, of Cabernet Sanvignon, Cabernet Franc or Merlot; these varieties are shy

and quality combined, I would a commend | have learned | there is but very little attenthe Tannat and St. Macaire. By such | tion given to vine culture. I can also regrafting, we will by degrees improve and port the same of Siskiyon, Humboldt, change the quality of our wines in a few years, to such an extent as to defy competition and adulteration. Ordinary wines are easily imitated, but fine wines cannot be imitated by artificial means; neither can ordinary wines be flavored to equal fine wines. To change the vineyards of ordinary white wine grapes, I would recommend grafting in Johannisberg Riesling, Semillon Blane and Sauvignon Blane. The Johannisberg Ri-sling is, perhaps, the finest of all white grapes, but is a very small bearer.

DISEASES OF THE VINE.

From general information and personal observation I am pleased to report the absence of any alarming disease among the vineyards in Sonoma district, with the exception of phylloxers.

In Sonoma Valley the phylloxera has heen found since the earliest knowledge of its existence in the State, and is slowly but surely advancing. It has reached within six miles east of Santa Rosa, where it has been found in one vineyard.

I am happy in being able to report that Mr. Dressell and others of Sonoma have proven beyond a doubt that the native wild wine of the Eastern States, Vitis repuria, it is practically demonstrated that the grafting of fine European varieties on this resistant stock is a grand success.

CLIMATE.

The frost has occasioned considerable loss in some of the vineyards through the middle and southern portion of the county; the damage aggregating about twenty-five ing twenty million vines. Sonoma Valley per cent. It is thus far impossible to estiand adjacent hills have long since proven mate the damage by blight or coulure. I estimate the crop of I887 thirty-three per cent, less than was that of 1886. The northern part of Sonoma county escaped frost, and the crop prospect is reported to be fully as large as that produced in 1886,

A comparatively new district has recently been developed, known as Green valley, lying on the lower part of the Russian river, adjacent to and among the redwood country west of Santa Rosa, where there are some ot the finest and most promising young vineyards of the State. This section bids fair to have in the near future a reputation second to none other in the

The energetic and enterprising viticulturist, Guy E. Grosse, of Santa Rosa, has demonstrated the fact that there are thousands of acres of land in the Sonoma district which, though at one time covered with brushwood and heavy undergrowth, and considered worthless, can now be classified among the best wine and fruit lands in the country. They need only proper clearing of brush and stone. The same lands now carry a value of frem \$300 to \$500 per acre when worked into good condition for cultivation.

The number of gallons of wine manufactored from vintage of 1886 was 3,500,-000, from 25,000 tons of grapes worked.

LAKE COUNTY.

There are quite a number of promising the climate, adaptability and nature of the soil, Lake county will in the future be one of our first-class wine counties.

MENDOCINO AND OTHER COUNTIES.

Of Mendocino county I cannot obtain

ANNUAL REPORT OF 1 DE TURIS, bearers, but of high quality. For quantity any positive information, but from what 1 Trinity and Del Norte. Marin county is slowly but surely increasing her vineyards. Respectfully submitted,

I DETURE.

Viticultural Commissioner for the Sonoma

FOR SALE.

Wine Press

- APPLY AT-

Office of "S. F. MERCHANT,"

FARM FOR SALE.

Two hundred acres in Sonoma County, ten minutes drive from railroad station, Forty acres planted in the finest variety of vines. The balance rich river bottom, and colling land capable of the highest entrivation. Several never failing springs and plenty of oak and redwood timber on the property. Good house, large barn, and out buildings. Scenery, climate and roads Barhara county, near Los Olivos depot. unexcelled. Good fishing and bunting in the neighborhood all the year round. One f the most elegant and profitable suburban homes in Northern California,

Inquire of "W. H.," office of the San Francisco Merchant.

Registration for the General Election,

All electors desiring to vote at the General Election to be held Novemb r 6, 1888, must be registered regardless of any previous registration.

Registration for the General Election to he held November 6, 1888, will commence at the Office of the Register of Votera, in the basement of the New City Hall, on WEDNESDAY, August 8, 1888, and will continue until MONDAY, October 15, 1888, indicates Office hours from Packleds 4, 4 Office hours from 9 o'clock A.M. to 5 o'clock P.M.

The registration of voters in the precincts will be held from October 16th to 20th inclusive. By order of the Board of Election Commissioners. BEN. A. PRINDLE, Regi-trar.

August 4, 1888.

OLIVE RANCH OF 448 ACRES,

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ASSETS: CAPITAL. JANUARY I, 1875.... \$ 300,000 747,488 45 young vineyards in this county, and with JANUARY 1, 1880..... 750,000 1,160,017 00 2,181,925 18 JANUARY 1, 1888..... 1,000,000

Losses Paid in Twenty-five Years, \$7,500,000 00.

D. J. STAPLES, President, ALPHEUS BULL, Vice-Presiden, WM, J. DUTTON, Secretary, B. FAYMONVILLE, Asst. Secretary.

OUR NATIVE WINE SHIPMENTS BY SEA.

DED D M	- 0	00'0	STEAMER	SAM DIAS	CEDT	15 1699

TO	NEW	YORK	

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makka,	*1175557	PROMINEN AN	INSTANTS.	151 55	s r
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Cota, amount of	Wine, 10 taxes and			25.510	s!!! >>
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TO CENTRAL AMERICA.

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V.A. Champerico Sperry & Co.	11 at as With	31111	~ .
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TO NORWAY

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TO PANAMA.

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PER P. M. S. S. CO'S STEAMER SAN JOSE, SEPT. 22, 1888.

TO NEW YORK

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▲ & Co	 **	20 na filarnis braniy bu agas Branis	526 600	2557 324
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CHALLENGE

Double Acting Wine Force Pump



The relief temperature of Bernettal Challege William performance of the sector when the sector when the end with ending in performance of the perf

The water wave are large at levery or than the whole pumper is simple of their every or than the get out of refer and we substantial as to review enough [11 + 1] in possible every used by Woodbern Terry in part to easily enough from place to place. The strain into the true or have town a form by the than he without the true of the true of the enough
EACH PIMP IS GLARANTEED,

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##SEND A LEGAL ORDER, 72

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till & 411 Montgomery Av

40 & 42 Fourth Street.

401 Hay a Street.

SAN FRANCISCO, CAL.

MERCURY TREATMENT FOR PHYLLOXERA

Repo t of Chas, Krug, Chairman of Committee of Invest gation.

To the Board of State Viticultural Commissioners

GENTLEMEN: At the regular meeting of the Board, held in the early part of the present month, you appointed a committee to examine the Hagen Vineyard, near Napa, in order to determine the effect of the mercurial remedy which had here been applied for the destruction of phylloxera some years previous. This committee consisted of Charles Krug, H. W. Crubb, and your Chief Executive Officer, J. H. Wheeler. It is now my duty to report to you thus promptly the result of our investigations

First, let it be understood that the remedy had been applied under the personal direction of its inventor and exponent; it may therefore be presumed that the work was properly and thoroughly done. To prepare the mercury for this use, it is reduced by triturating with clay to a state of minute division. A small quantity of the mixture, sufficient to include one half ounce of quicksilver, is placed in the hole prepared for receiving the cutting or rected vine. Its presence here, and spreading - a quality peculiarly possessed by this metal-is expected to destroy the phylloxera, and pre serve the vines from further attacks.

Mr. Crabb was unable to accompany me, but Mr. Wheeler and myself, on the sixteeath instant, examined carefully the vines treated, together with those left untrested in Mr. Hagen's vineyard, and could observe no difference in favor of the remedy. The vines were young, of only a few years planting. The roots of many of those treated we dng np, and they revealed the presence of a multitude of insects actively engaged with their work of destruction, their damage plainly evidenced by the swollen roots, rotten fibers, and nodosities, All of the plants exhibited a languishing appearance in the foliage, and proved nnsatisfactory in other respects.

It will be remembered that exhaustive experiments were conducted by this Board with the same remedy, in Sonoma and elsewhere in 1885 and later, with results identical with those here noted and reported; and although the Board was satisfied at the time as to the inefficiency of the remedy, this committee was appointed and attention was again called to the matter at the solicitation of the inventor of the remedy,

We are now able to confirm the results announced some years since as to the total inefficiency of the so-called remedy.

OTHER OBSERVATIONS ON RESISTANT VINES

A few Lenoir vines were found apart from the treated spot, but on similar soil and with other conditions equal. These, though not treated with any remedy, exhibited a vigorous growth, notwithstanding the presence of the few phylloxers which we found on their roots

Riparias, also untreated, were found on the same ground; they showed a small growth, though the roots were free from phylloxera or nodosities. The Californica had been tried, too, but they did not appear healthy or vigorous, and the roots were found infested, very knotty, and bad.

While visiting Mr. Hagen's vineyard, we were led to examine an old wild vine-V. californica, which appeared like one infested with phylloxera. This surmise prov-

tute of healthy fibers, and the old roots, | made from other portions of the State, not where not already rotted, were actively crowded with the dread d pests. This vine was large and old, growing in its native soil, and that the rich mould of a creck bottom. The canyon wherein it grew was some distance from the nearest growing infested viniferas, and it seemed that the discuse pinst have come to the wild vine through the winged form.

The Commission has often sought for evidences of phylloxera on our wild vines in their native State, but up to this time none have been found, this being the first case of the kind discovered.

Yours very respectfully,

CHARLES KREG. Chairman Committee.

GRAPES FOR SHIPMENT.

Tae yearly increasing sales of California fruit in Eastern markets are significant in their relation to the future history of the fruit-growing industry of the State. By a careful examination of the facts before him, the practical fruit-grower is enabled to grapple to a better advantage with the allimportant problem of what to grow. If the increasing demand for California fruit, accompanied by a corresponding increase in the facilities for supplying that demand is not sufficiently significant to warrant an increased attention to that particular branch of the fruit industry, then the decrease in the price paid for wine grapes is not indicative of production far in excess of the marketing facilities. The farmers of this county have heretofore reposed all confidence in the capacity of their vineyards to yield them a profitable revenue, but the experience of the past two years has done much to bring this subject into question. At the present price paid for grapes the seconomy of the farm is poorly subserved. The land does not yield commensurately with its worth, and a doubt is suggested as to the expediency of maintaining so many vines. Some of the vine-growers recommend the cultivation of more table grapes of the choicest varieties. The question, then, suggested, is what shall be done with the table grapes after they are grown? An answer is to be found in the fact that a number of carloads of grapes, already contracted for, will be shipped East from here this season. It may also be mentioned a Vacaville company had agents in the county this summer, with a view to contract ing for several carloads of table grapes for shipment East. But they were not to be found and no contracts were made. The farmer, when advised to cultivate an acre or two of choice table grupes, asks where he can find a market for them. No one in the county is engaged in that particular branch of the industry. He is right if he refers to any special traffic in the finer varieties of grapes. No firm has, as yet, engaged extensively in shipping fruit of any kind. But the fact that shippers from other localities were anxious to contract Tokuys and Muscats at \$25 a ton in carload lots, is proof sufficient that were the grapes accessible, a ready market could have been found for them. Not that there are not a sufficient quantity of table grapes grown in the county to fill several carloads -trainloads possibly-but they are so widely distributed throughout the county that a carload could not be loaded within the time prescribed within the safety of the fruit-one week. When the vine and fruit

more fortunate in their railroad facilities, he reasonably asks himself and his neighbor why they should be denied such advantages? And his neighbor asks why? The solution of the question devolves upon those whose interests are involved. Ex.

VINEYARDS OF NAPA.

The St. Helena Star has been making the rounds of the vineyards in the surrounding districts. From a number of reports we glean the following: The Drew Vineyard has experienced little injury from the hot weather and subsequent rain, consequently there will be a good crop Mr. Groezingin, who has just returned from a trip to Europe, has just begun his winemaking operations fore part of last week. He has not suffered much by the sun and he does not anticipate much loss from the rain. He will ship five earloads of wine this week to New York. He is buying some grapes, but is particular that they are in a healthy and sound condition. Here we find one of the finest wine cellars in Napa County, everything being clean and nicely appointed throughout, The building is ht up by gasoline. The gentleman has, also, one of the largest and handsomest residences in Napa county.

Mr. H. A Pellet has increased his cellar capacity this year some 20,000 gallons, and has been engaged three weeks in making wire, and expects to make 20,000 gallons for himself, besides about 10,000 gallons for Mr. Carver. His crop will fall short 20 per cent, on what he expected earlier in the season. His Zinfandel has been a little rebellions in fermentation, but by proper care, he got them through all right, thus far. We were shown several tanks that were crushed on the 15th and 16th, which has gone through, and were perfectly dry. Everything in his cellsr is nicely arranged, with an eye to convenience and cleanliness. He says the cool spell was very beneficial, especially in the way of fermentation.

In regard to the total yield, it has been greatly reduced. Up to the beginning of June the grape crop promised exceedingly well, only a few vineyards having suffered by the frost. During June the coulure, or falling through, effected the vines to some extent, and in July and August the excessive heat caused considerable damage. The Inte rains seem to have been the stunning blow, and the grapes are rotting at an alarming rate in many places, especially where the land is very rich and the foliage heavy, which prevents the sun from drying the soil. J. McIntyre of Oakville, states that he will be able to pick but a very small portion of his Zinfandel grapes, and J H. McCord will lose between fifty and sixty tons. Mr. Krug will also be a very heavy loser by this rot. These are only a few instances which came under our notice, but there is no disputing the fact the damage is widespread and our winemen are much alarmed over the state of affairs. The grapes on the hillsides and on poor land seem to have escaped. The general supposition now prevails that the yield this year will not reach 15,000,000 gallous.

YOLO RAISIN INDUSTRY

To an Eastern mao a description of the wonderful productiveness of the Yolo county vineyards, sounds like a fairy tale When we tell him of plucking bunches of grapes that contain 700 to 800 berries, and ed correct, for the roots were found desti- grower considers the large fruit shipments of berries that weigh at the rate of 50 to 60

to the pound, and of five year old vines that produce upward of 100 pounds each, the Eastern shake's his head incredulously, and remark's "that sounds like the pyperbole indulged in by the Los Angeles resl state dealer when advertising some cactus desert for colony purposes" Yet these are not fairy tales, nor are they exaggerations of the plain truth. At the invitation of Mr. D. A. Jackson, one of Yolo county's most industrious and painstakeu yiueyardiste, we took a ride through his own vineyard, and those of his neighbors whose grape crop he has purchased, and on this trip we saw with our own eyes and tested with accurate scales of the truth of the statements made above. Mr. Jeckson's vineyard is small, but it is one of the most profitable in proportion to its acreage of any in the country. He has purchased from neighbors about 100 acres of raisin grapes of the muscatel and Sultana varieties, {He has just finished picking of the crop of Sultanaa in Thomas Riders vineyard. He bought the grapes on the vines and after picking and weighing them, he found that he would have to pay Mr. Rider for 71; tons per scre, which . at \$15 per ton would net Mr. Rider \$110 per acre. This crop was produced without irrigation. The process of enring the raisins consists in dipping the grapes in a solution of carbonate of soda and a small per cent of cottonseed oil; theu placing them on trays in the sun to dry. In four or five days the grapes are turned ou the trays, and in about ten or twelve days they are ready to be put into the "sweat box" preparatory to being packed for market. Mr. Jackson employs none but white labor, and pays \$1.50 per day. In his long experience in the raisin business he has never employed a chinaman. Ha has already sold three car loads of raisins to be delivered whithin 20 days, receiving therefore quite an advance over last year's prices. In the near future we hope to take a trip through some of the larger vinayards, and give an account of what we see occurring there. Yolo county will some day compete with Fresno for the honor of being the banner raisin county in the world. She now stands abreast of Fresno in the quality of her raisius, and may yet over take her in quantity as well—Ex.

Unfermented Wine.

This receipe is from the Union Signal: Pick the grapes from the stem and wash. Cook with water as for jelly, notil soft. Strain through a flaunel bag. To one quart of juice add three-quarters of a pound of granulated sugar. Let the juice boil and skim it, then put in the sogar and cook until dissolved. Put boiling hot in self-sealing jars or bottles corked and

Another manner for making unfermented wine, sweetened to suit those who prefer it, as follows: Mash the grapes and press out the juice. Before boiling it, sweeten to the extent desired with best white sugar; strain carefully; fill the bottles and seat them upon a wooden foundation in a boiler; surround them with water up to the necks; bring to a boil and boil ten minutes; then from one of the bottles fill all the rest, to make up loss by evaporation, and cork them while hot; after corking, seal tha corks, the sulphurons acid gas, impregnating the juices, will be volatilized and driven off by the heat. By putting up the wine in this way, it can be kept too years or more.

Subscribe for the MERCHANT.

MEANS OF FOREFELLING PROST

(Correspondence of Vitiga tural Commentation & Charles Kruzi:

With a view to providing facilities for anticipating frost and averting the damag . as we may sometimes do, by means commonly known, I have thought it advisible to append the following, which has previded a grain of comfort to me and others who bave suffered somewhat during the prisint be considered separately at this senson of season. The letter explains itself so livedly the year. Speculations as to the most feasas to call for no comment from me, and 1 lible and practical methods for disposing of desire to express to Mr. Maxfield particular the grape crop to the greatest possible adobligation for his promptness and court sy-

CHARLES KRUO

Signal Office, War Department, San Francisco, Murch 22, 1887 Mr. Krio, St. Helma, Cal:

DEAR STRY I am pleased to Inclose her with instructions for the use of the wet and dry bulb thermometers, and a dew point table, which I hope will prove satisfactory to you in foretelling frost

Very respectfully yours, J. E. MANFIELD.

Second Lieutenant, Signal Corps, U. S. A.

THE WET AND DRY BULB BYGGOMETER.

order, one or two things require special attention. The thermom tirs most be different quantities of the same finid, the thin muslin covering and thin cotton terfered with. The bulbs of the thermometers should be made one and one-half or two inches below the scale. The thermometers should also be a little apart from each other, and the vessel containing the water be as far removed as possible from the dry-bulb. The thermometer should be exposed to the air where the circulation is and should always be in the shade. They should be removed at least a foot from the wall of any building, and should be about ten feet from the ground. They should be protected against the heat reflected by neighboring objects, such as buildings or a from the rain. If the dry-bulb should become moistened by rain, the bulb should water, by their evaporation, would lower) the temperature of the mercury in the bulb.

The dew-point can readily be determined by the following rule and table

bulb from that of the dry-bulb, opposite which, in the column that is marked at the top, with the difference between the wet and dry-hulb, is to be found the dew-point aought.

Difference of depression of wet-bulb. ...?

Looking for the temperature of 47° on the left of the table we find in the column under the 7° the figure 28, which is the & Co. By the exclusive manufacture of dew-point,

below 3., expect a frost before morning if sky is clear and there is not much wind

. . THE GRAPE CROP

The grap erop and the facilities for marketing the same, says the Sonoma Democrat, are subjects which can not well vantage, are all right in their place, and may attract a share of the wine-growers attention when the season is early and the truit is in the embryo, but when the eroq has matured and hangs in bursting cluster on the prolitic stalk, there is no time to be lost in idle the orizing. The exigence s of the time are imperative. The crop will not wait until a conclusion is arrived at conterming its disposal. If there are no market facilities at hand the wine-grower has either to stand by and see the product of his industry and the fertile land in which his all is ravested, decay on the vines, or untroduce some decisive means for avertin-To kyep this instrument in working the loss threatened. The condition of the crop in this county is not such as to conduce greatly to the vine-growers' peace of alike, for if one is filled with in reary, and mind. In some parts of the county the the other with spicits, or if they contain intense heat has deer used the value of the crop by one-third. The quality of the unreadings will be virial. All starch, or injured grapes, however, is up to the averforeign matter, should be washed out of the page in sacharine, and, other essential propcities. It is not so much the damage suswicking. The water used should be pured turned by the crop as the innelequate facili for if time or other salts he dissolved in it, ties for its disposal, which is causing the the mushin will soon be conted with a cal- vine-growers so much concern. It is under cerous or other incrnstation. Rain or dis-stood that some of the wineries are able to tilled water should be used. The mushin buy but a very limited quantity of grapes, ought to be changed when covered with thereby to consitating the finding of a mardust or other impurities, and care should ket alsowhere. The report comes from be taken not to touch the muslin with the some of the vineyards in the northern part fingers, otherwise it will get slightly greased of the county that the crop is not worth and capillary attraction will be thereby in- picking. The price paid will not compensate for its cultivation. The condition of affairs is, in all probability, somewhat exagg-rated, if not actually misstated. No such complaint has, as yet, been heard in this part of the county, notwithstanding the small price offered by the wineries. It is not so many years ago that the products of our vineyards brought the producer \$25 unobstructed. They should face the north, a ton. The same crops, equal in quality, now bring their producer \$8 and \$12 -the choicest varieties perhaps as high as \$15 The problem evolved from the disparity existing between the prices of te-day and of a few years ago, must be subjected for its solution to an application of the laws regusandy soil, and they should be shelt-red lating supply and demand. And yet the solution will be unsatisfactory unless considered coincidently with the capacity of be carefully dried about five minutes before the soil to produce other growths of greater making the observation, since drops of profit to the producer. The wisest of our vine-growers are at hand with a remedy. The hill and mountain land, say they, should be devoted exclusively to the cultivation of the vine, while the valley and RULE -- Subtract the readings of the wet- lower lands should be apportioned to the fruit tree and herry. While the low land will produce a fine quality of grape, it is equally as certain that the hill land will produce a finer quality of grape. No one doubts the adaptability of the low lands to the prolific and profitable cultivation of cereals, or to the healthful and fructifying growth of the apple, peach or plum. Among the first in this vicinity to make a practical demonstration of these generally conceded facts was the firm of Lay, Clark

Whenever the dew point in evening is have mode for thems by some and must I and tarry the first genome sparits of wine logan profitable market, both at home and abrevel to be made. The brandy their distilled Near Sonome the vine-growers have an was at first only used for medical purposes, example in the firm of Kohler & Frobling (6th respect that as early as the XIVth and at Cloverdal on the Saiss-Ira an century the mook Tully and Arnold de colony. A great dial of the ight neget by Viden by distilled in France, the first expended in amplification of the present brainly. Conductey been probably in consitientural problem and its whiten but separate of wir, and ration, began to rethe general and initial facts come ted a apper the triatery it had lost. So much therewith are sufficiently obvious to the thoughtful von -grower to invite his rither that entangkinds of hear soon became

IN TIMES OF YORK

The Rh on Brown of the about talacwine consumption in Central Large, to times of yor says.

The Foutons as a people long disposel wine and a thereof to their been, even been after they had conquered the Ri, nish and Moselle provinces, where their problems sors, the Romans, had speed viticultur only the richer among the large class y took (South in wines. The more gineral citsumption of win s in this regions. indeed, exclusivity to to the care which the manks historical on win agreeing and making, and they succeed d so well in their end-avors and during the XVth contury wine had virtually supersed delicer. The most remarkable fact in connection with the culture of wines was that it rapidly spread to regions in the north, where it has since been abandoned for many ic n-

Thus, Bishop B and of Meissen planted : the first vine in Thuringia in 1073, and in-1128 Bishop Otto von Bamberg carried a whole eask full of stalks to Pomerania and planted them. All the way beyond Konigs berg there was viticulture, even near Tilsit. due to the initiative of the warlike tier man order. The wine mad was, of cours little better than vinegar, even worse ii many localities; in new the famous " Dreimsmenner-wine" of Potsdam and Gran-berg in Lansatia, where it required, so they say, three stout-fist d men to hold the unfortunate victim that had unbiled it. In-M-cklenburg, near a vil age called Plau, a wine was grown as late as the XVIth conary so sour that maughty children were threatened with a glass of it. In Southern Germany, especially in Austria, Bayaria and Francoura, and on the banks of the Upper Rhine, wine asmost altegether same isided beer, on account of its extreme cheapness. In Wintemburg, in 1426, the pail of old wine was selling for 13 krenzers. (about 5 cents of our men y , and in list an egg would buy a measurwine. On of the noblem n invit I his peasants to visit his collars and druk to their heart's content, and the fin she inposed upon them for exposes among them during the e dousal amount of to more than the wine would have brought in the open market. The years 1420 and 1420 were memoracle for their abundance of win ; which was such that a man could got intoxicited on what half a cint of our money procure I him. The coment as dan building the cathrodrals of Vienna and Ulm, during the years named, tradition reports was moustoned with wine. The cheapinss was, of course, a relative one, ittle money then commanding any amount of the necessarps of life, till the Sounish galloons returned from M xico and Peruwith their treasures of gill and silver, eausing a gradual rise of all commodities.

From the moment, the value of wine appreciated under these influences, adulterawine from none but mountain grapes, they tool began to flourish. In the XVIth con- SANTA HARHARA

it was lost and on ir wing a good arcollaborated in Northern Germany, for exstuple, Hooking Zabst and Saumberg bors, and the r nowned " 31 umme" of Bronewick In the AVth century Homborg ' Brash din' got to be esteemed as highly as South rn wines, and its intoxicating off et is said to have been as great.

The wine-greening populations soon to gain to claim a against the beer invasion. The mannerpointy of Rauthingen in Wartemberg simply suppressed the breweries to please the owners of surrounding vine-

Extraordinary were the individual capabasis of including wine during the sixto onthe outlary. Theis, on the occasion of the wedding of the Prince of Grange with the Saxonian Princess Anna, in 1561, 3600 pouls and 1000 casks of common wine were drank during the six days the festivities lasted. When, in 1511, Duke Ulrich of Wart inburg got married, there were consum d by 7000 invited guests during the e lebration of the event, lasting a couple of Lays, 736 head of cattle and 1000 calves; while night and day one fountain spouted both and wine and another white. The aist Count of Gorz, a confirmed drunkard. used to get out of hid at night and compel his children to do as he did, and drink

As a sort of respect, expressed either privately or publicly to casual guests, they were mig I to freely partike of beer and wine. A king, hon dring with his presence the ancient Hauseatic city of Labeck, was tendered by city usage 4 pails of wine and 16 neusures daily, as long as he staid within the walls of the city; a queen recerved 3 pails and 5 measures, an elector got 12 measures, a dake 5, a count or bishop 4 a countess or knight, an abbot, burgomest is or doctor of a university only reconvol 2 measures, and a manierpal clerk 1. All these wines were taken from the best the municipal cellar contained. Annually the Hanse towns sent a present in the shape of select win s to courts near by in order to conciliate them.

The Hause towns had their sunnal meeting of delegates, hobbing a sort of congress of their own, and at the session of the same in 1447 steps were, for the first time, publicly taken to suppress adult ration of wines, if possible, by decree, orders being ant to that effect to the Hinse towns, Cologne, Bingen, Frankfort and Strasloung. At Ulm all barkeepers were compelled to swear that they abstained from al sophistication of any kind of their ames, by ord r of the city council of 1487, At Stuttgart, as late as 1706, a wine adulterate, by the make of Erm was solemnly b h a d in the public square, some persons who partook of his inixtures having

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It is hoped that the foregoing statements will indicate that the time which has clapsed since appropriations became available under the Hatch Act, has been diligently utilized.

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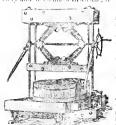
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VOL. XXI, NO. 2.

SAN FRANCISCO, OCTOBER 12, 1888.

PRICE 15 CENTS

REPORT OF C. J. WETMORE.

Secretary Board of State Viticultural Commissioners

To the Bound of Sars

Pitter time to a comme

GESTIEMES . In specifully report that retary for the past year have been performed to the best of my ability.

A great many letters have been received from parties seeking information respecting all branches of viticulture, and all of them have been promptly answered or referred to responsible, parties who could answer them. As the Lirge planting of vines. has been checked for the present, more letters were received from parties wishing to know how they could dispose of their profucts at a profit than from parts s asking information as to what vari ties of vines hey should plant. It is the wish of the majority of producers that this Commission will devise some plan to help them find a market for their products.

The demand for the reports of the Commission has been a constant one. The sup- | the grape crop by frost? ly of Appendices I, II III to the Second unual Report of the Chief Ly cutive Offier is nearly exhausted, and I would recmineral that a new solition by published s the information contained in them is so aluable that they will be always in deand. A great many applications for reerts have been none of from the Listern tates, Mexico, Lurope, and Australia. In ustralia the reports have been greatly apreciated, and I have just received word hat a Board of Viticulture in Victoria has en brought into existence by that Goveenment in a similar way that this Board. as created by our Legislature.

During the past year Chof Eccutive Meer Wheeler has instituted a new plan ort on subjects of immediate importance vineyardists. The reports of the Comablished and sent out. The mailing of so any pamphlets has greatly increased the ork of this office, as our mailing list has creased during the year tully one third. id now contains over six thousand name -I have devoted considerable time to the mpiling of a new directory of grape owers and wine makers of California,

lished for distribution. I will then envarieties planted, from each person whose name will appear in the directory.

so large, and the unwillingness of so many the duties d volving upon the office of Sec. | vineyardists to give the information asked | plicate of it retained in this office. for. During the year 1886, Mr. F. W. Morse, of the State University, was employed by this Commission to gather vite cultural statistics. After working several months he obtained very complete statisties from some counties, while from others he obtained but little. During the past year, by order of this Board, each Commissioner was allowed to expend a sum not to • xeced \$150, in collecting statistics for his annual report. Some of them used this amount, or part of it, and so added greatly to our statistical information.

> In order to obtain accurate information specting the erop of 1887 I sent out in July a circular to our Juspectors and other persons throughout the State, asking them to answer the following questions:

First. What is the estimated damage to

Second. What is the estimated damage to the grape crop by coulure?

Third What is the loss by disease or other cause (naming the disease)?

Fourth. How will this year's crop in your vicinity compare with that of 1886, new vineyards included ε

Fitth - What vericus will produce a full

Sixthe-What varieties will produce light crop, and why 4

To these circulars I received, by August first, one hundred and fifty-one replies an't was able then to estimate the wine grop of 1887 at sixteen million gallons, and the raisin crop at seven hundred and fifty thesis and boxes. At the time, I made that sending out appendices to his annual re- estimate. It was criticised severely by one nowspaper for having 'put the crop so low, but the final result of the vintage did not issioners, as fast as received, were also vary very much from those figures. I shall follow the same plan in the future, and hope by the first of August of such year to be able to give an accurate estimate of that year's crep.

After the passage of the State Pure Wine mercased, owing to the great number of

and as soon as completed wilt have it published adult rations. All of the samples, upon receipt, were numbered, and a record of deaver to obtain the aerease in vines and the number, the sender's name, and a de-the id utity of the wine has their timbs scription of the wine was kept in this oftice. The samples were then sent to Prof. The gathering of accurate statistics is a W. B. Rising, State Analyst. Upon re-this city, where the temperature is uniform very difficult one, owing to the State being ecipt of the analysis a copy of it was sent through ut the whole year, selected from to the party sending the sample, and a dur-

ENTERIMENTAL CEITAL.

At the s ssion of the Legislature in 1885, the following appropriation bill was passed:

Tor viticultural, experimental, scientific, and analytical work, including apparatus and suitable accommodations for the same. under control of the Board of Regents of the State University and the Board of State Viticultural Commissioners, tenthousand dollars.

This appropriation gave this Commission the use of \$2,500 for the year July 1, 1885, to July 1, 1886, and 52,500 for the year July 1, 1886, to July 1, 1887.

At the same session of the Legislature the office of State Analyst was created, and Professor W. B. Rising, of the State University, was appointed State Analyst, As no appropriation was made for carrying on the work of the State Analyst, the Commissioners decided that the best use they could make of the above money was to carry on analytical work at the office of the State Analyst, and to establish an experimental cellar in this city.

To every on the analytical work required. by this Board the State Analyst was compelled to employ an assistant, and the Board agreed to pay the salary of such assistant, and also to purchase such apparatus as was necessary,

In this city a cellar, situated on the corner of Clay and Leidesdorff Streets, was rented, in which the Commission could him 52 per day for the time he worked tions of the State, and also the samples the samples has not been very heavy, of Messes, De Tark, Wetmore, and Kring was appointed to look after the intorists of said cell ir, and the select suitable wines to [grape for litin by purposes, I - bia ned two la store l'in it

A great many vineyardists throughout the State have of late years been planting (them in the back room of the office and new varieties of grapes in order to see the lafterward distilled the wine measurall suff Bill the work of this office was muterially kind of wine that can be produced from that belongs to this Commission. The rethem. Such complex of wines have, in sult was a few gallon. I say elected rockly

wine in the been financially forced to will them, and come lost. The committee, knewing the value of having such samples stored in different portions of the State such samples as they thought would be of interest to keep, in order to show what such wines would be when three, four, or five old. They obtained a barrel each of colecet and 15 of ot, Color of and Meet to Colo. et and Time d. Takent, Ist Cong. t. h. W. de se, Mercher, Mercher, Commercia, Lot Zinglands Come Vote, Pet Pro 1, 84 term, Johnnadske i Rossing, Frank a. Semi or, Carole Gree, Freez Sam. brandy, and port. Most of the wines are of the victage of 1886, and at the present time are in good condition and improving well. As soon as the wines are ripe enough they will be clarified and put into bottles

SHELRY

To test the values of certain varieties of grapes for shorry, a small room was fitted up, and heated by means of a gas stove, and temperature kept up to 412. Fahr, Into this room small samples of wines were put and kept there for three months. The varieties put in were troche, to asset on, Heat Southquan Vert, Ve de ha, and West's Willie Pro file. In the cellar some trade or have dus wine was jeit into barrels, and left to make sherry by the natural way. Being a cocl cellar, it has developed very slowly

The looking after the samples in the cell lar, such as racking, ulling, etc., has been a portion of my work, and I have given it all the time I could space from my daties in this office. To do the reach work, I have employed a monat odd times, paying stere samples of wines from different per- The expenses, therefore, or taking care of being 52% per menth for rent of clark and

To test the value of the hose blanch hundred pounds of fresh grapes from Mr. S. Osterbour, of Lavern er a del fermented most uses, been sold with the bulance of 101 true orginal type, which is now pr

nonneed by all brandy experts as equal to the imported cognac of the same age. The Folle Blanche grape can therefore be recommended to all parties wishing to plant a vineyard for the purpose of making a fine brandy of cognac type.

LIBRARY.

I have just completed a catalogue of the books in our library, which same I hand in to be published with this report.

Our library now contains four hundred and twenty-one volumes, consisting of nearly all of the standard works on viticulture and viniculture in the French and English languages. A number of German hooks will soon be added. No one has been permitted to take books from the office, but all persons have been cordially invited to visit our rooms and make use of the library during office hours. A great many persons, during the past year, have availed themselves of this privivilege.

I also hand in my report on finance, and a copy of the minutes of the meetings held during the year.

Respectfully submitted.

CLARENCE J. WETMORE, Secretary.

RAISINS IN NEW MEXICO.

H. B. Whiting, writing in the Daily Citizen, says: All of the raisins used in New Mexico, Colorado and Texas are imported; mostly from California,

So profitable an industry in California, is almost wholly neglected in the valley of the Rio Grande, in New Mexico.

We have devoted considerable study and time to this subject for years; have correspended with a number of the raisin growers of the Pacific Coast, and have seen for ourselves to some extent. From information gained, from a knowledge of the climate of this valley, acquired by a constant residence In it for over twenty years, and from the successful experiments made in different localities there in the growing of the Muscats, we are satisfied, beyond any reasonable doubt, that the culture of these raisin grapes may be made highly profitable in any portion of the valley, from the northern line of this (Bernalillo) county on the north, to the Texas line on the south.

We wish in this article to call the special attention of capitalists seeking secure and profitable investments, and people of moderate means, and all interested in the development of this Valley Hermosa, to the profit of the industry of which we write, and the advantage we shall have in its prosecution, over the most favored raisin districts of the "Golden State."

At Riverside, Boyd & Devine, prominent raisin packers and dealers, lately purchased of S. C. Evans his crop of Muscat grapes on about 100 acres, for the sum of \$10,000 on the vine. To raise these grapes it has cost Mr. Evans about \$25 per acre, per year, for water, care and cultivation, the sale thus leaving him \$75 net per acre, for this year's crop. The price paid was hased to some extent, on the yield of the two previous years, which was something over 8,000 boxes. This year it will be larger.

Mr. Evans says that after examing his vineyard, and wishing to avoid the trouble and annoyance of picking, enring and packing, he made up his mind to sell the crop, if possible, for \$10,000 on the vine; but if no purchaser took him at this price, he would sell at the best offer per ton on the vine. He submitted his proposal to the interior. several buyers and received bids at from Our vineyards may not yield as bounti. is often in such proportions that the wine England with 4 per ce \$18 to \$20 per ton on the vine, and he fully as those of Riverside, but with the ceases to be anything like the juice of the lands with 7 per cent.

closed with the dealers named, at the price mentioned, on the vine, for the lot.

Now with this reliable statement of facts, as to what a raisin vineyard will give in Southern California, at five years'-\$100 gross, or \$75 net per aere-can any person give us one well founded reason why as good results should not be attained in the Rio Grande Valley in New Mexico?

The San Francisco Merchant says that land at Riverside " can yet be purchased at \$250 per acre!''

As good land can be purchased to-day in this valley, away from the large towns and near a trunk line of railroad, for \$25 per

Allowing, for the sake of argument, what Californians claim, viz: That their vineyards become profitable earlier than would ours; yet with this against us, our vineyards would give some returns the third year, and at the end of the fifth year we should have for the third, fourth and fifth years a gross product of the value of say \$20 per acre, calculating \$25 for the third year, \$75 for the fourth and \$100 for the fifth. The expenses we sum up as follows: Original cost of land, \$25; preparing soil, fencing, planting, water, etc., first year \$25; expenses second year \$12; third year \$15; fourth year \$20; and fifth year \$25, a total of \$122, giving us our land clear, and a surplus of say \$75 per aere to cover taxes and extraordinary expenses. From this time on our vineyard should give us a net profit per acre of \$75 per annum.

At the end of the fifth year what will be the value of our raisin vineyard in the valley of the Rio Grande?

At eight feet apart, (and vines for facility of cultivation, and other good reasons. should not be set closer) we have 680 vines to the acre. Should not 680 Muscat vines at five years of age and in good bearing, be worth \$680, or at the rate of \$1.00 per vine? The vineyard certainly would readily sell for the half of that sum-or, say \$340 per acre for the land including the vines. The smaller valuation would pay an income of say 22 per cent on such valuation. Before the advent of railroads in New Mexico, and before any one here but the most sanguine expected them in leasthan a decade or two, parties selling vineyards of the Mission grape-sold land and all at the rate of one dollar per vine, and vineyards in those days were much more closely planted than are those that have been planted within the last eight years. Many of the old vineyards had as high as 1,000 to 2,000 vines to the acre, and of these there are still some in

In addition to the cheapness of our valley lands, as compared with those of Riverside, we have cheaper water, cheaper unskilled labor and a market at home, and also in Colorado, Texas and Kansas, at our very doors, for all the raisins we could raise for many years, were we to begin planting at once. With our own and the markets of the states named supplied, we still have the great advantage over the raisin districts of California, of being nearly 1,000 miles nearer than they to the eastern markets. We have still another advantage over the California coast counties where so many raisin grapes are grown, Our climate in the Rio Grande during the late summer and early autumn is usually dry. There they are forced to cure their raisins by artificial means, or transport their grapes togthe hot, dry valleys of the

they will. They may not come as quickly into bearing. We have also the extra ex protecting the vines in winter, which will in time be proved to be unnecessary in many parts of the valley.

We hope to see by the coming spring, hundreds of aeres of the choicest lands of the vailey of the Rio Grande properly prepared and planted to the raisin grapes. The Muscat of Alexandria and the Museut Gordo Blanco are the varieties grown from which the choice raisins are made in California. If you plant either you have a good rasin grape, and if you plant both you will not go amiss. It would require more of an expert than we profess to be to p int out the difference in the two varieties, if there is any Many Californians inform us that there is no difference.

Many not conversant with the capabilities of our grand valley, may consider the fig ures we give in its favor, exagg rated anour hopes too sangnine. We do not thin so, but have honestly and fairly stated our convictions and opinions derived from wacl study of the subject upon which we have written.

If what we here advance shall cause pa ple to look into and examine our stat- ment with fairness and candor, we shall hav accomplished what we started out to do. being satisfied that with investigation will come action, and raisin growing soon b come one of the great in lustries of Now Mexico, in this valley of the Rio Grandthis valley of the "American Rhin"."

ABOUT OLD WINES.

There is, says an exchange, probably no greater delusion in the modern gastronomic art than the notion that age enriches wine illimitably. If a three or five year wine is better than the crude juice, the process must go on forever, and the wine of 500 years must be the veritable nectar of the gods. It is a myth of the poets. Wine is an organic product, and to every organic there is the immutable law of growth and decay, life and death. There is no exemp tion. Dosing with foreign substance, fortification with brandies and alcohol, care of temperature and other devices may stave off the fatal decline, but for only a little. An item is going the rounds of the press that the wines of the late king of Bavaria, some of them a century old, have been hought by English speculators at enormous prices to resell to English gourmets. Upon this remarks the writer in The Paris Register:

What the item says about the wines of the excellent vintages from IS22 to ISS4 is doubtless true, and possibly it may be true of the Johannisberg of 1811, but I have no hesitation in doubting that there is any truth or goodness whatever in the vintages of 1540, 1640 and 1731.

Now, what are the real facts about wines as old as the above? After fermentation, which is a process of decay, wine will deteriorate unless preventive measures are taken, such as keeping the wine in a cool or even temperature, the addition of alcohol, boiling (the visum coctum of the Romans and the vino cotto of modern Italians), and the complete exclusion of the ordinary atmosphere by good corks, by scaling wax or by oil. The most common method for preserving wine in modern times is by adding alcohol and by corking and sealing. The alcohol in wines prepared for England is often in such proportions that the wine

same culture as those receive, we believe grape, and too often is as strong as a glass of brandy and water.

In 1871 Mr. Rabello, the Brazilian consul at Oporto, made me a present of several bottles of port wine of the vintage of 1793." Mr. Rabello had heard of the breaking up of an old Portuguese family where, from father to son, a certain number of bottles of famous vintages had been handed down. I sent several of these aged wines to the late William Cullen Bryant, remarking that the bottle of 1793 was, according to the encyclopedia, of his own age; but the poet, in acknowledging the reception of the wind, stated that it was his senior, and that he should look up to it with reverence. When I came to open my bottle of 1793, I found it (which once had the dark red of port) about the color of water, and the most insipid stuff. Up to the beginning of this century it was not the custom in any part of Europe to put a lo of fiery alcohol into any kind of wise, and when they did add spirit to port wine it was a little of that which had been distilled from port. This 1793 wine had probably thus been treated, out with all the sealing wax, and a once good cork, the b-verage was as unvisous and tasteless as if it had been water dipped ip from a pond and bottled. Therefore, I coubt if the Bavarian wines, so sedulously dvertis d in England as those of 1540, 1640 and 1731 have any virtue in them, ven if they be genuine wines of those lates.

The ancients, having no distilled spirits, were wanting in one of the great remedies which prevent wines from decaying or turning to vinegar. Homer represents old Nestor, in the "Odyssey," drinking tenyear-old wine. Athenaus incidentally mentions a wine kept sixteen years; but, in the days of the empire, connoisseurs considered Greek wine a perfection when six years old. Horace tells his friends, when they come to see him, that he will give them "three-year-old" wine. But the ancients evidently did keep wine, either by boiling, or by very tight corking and putting plaster upon the corks, or by burying it, for twenty or thirty years. There is one wine jar (amphora) in the museum in situ at Pompeii, which, if the label is to be believed, and if wine was in it at the time of the destruction, must have been over forty years old in the year 79 A. D., when Pompeii was destroyed. But we must remember that ancient wine dealers could cook up labels, and give fictitious names, just as well as the modern descendants of their craft

As to the wines of the ancients, I believe, in general, they were, for the upper classes, much more artificial than in this present age of adulteration, because it was a fashion for centuries to mix wines, and to flavor and drug them to such an extent that we moderns would never drink them and would not take them except as medicines. Not only were spices, fragranf roots, leaves and flowers steeped in the wine, but myrrh, cassia, nard and pepper were put in and, as if even these were not enough, flour and grated goat's milk cheeas were sprinkled over the wine just before drinking.

Timber Countries.

Sweden is the richest timber country it Europe, 39-7 per cent of its land is covered with timber. Then follows Russia, Austria Hungary, Germany (with 25.7 per cent.) England with 4 per cent., and the Nether

CHAMPAGNE WINES

A New an Important Discovery

nedical and chemical authorities,

he manufacture beginning with the estab. If not richcule, as a thing impossible, ishment of K ssler, in Essling n, in 1826, and now carried on by about sixty estabpublic in 1718 with the statement that it and been known for twenty years. It was Forcer," and its preparation supposed to

se effected with the aid of magic. The production of champague by the old ess. In the late spring the process b gins nade out of young wines in which living terms are essential. The bettle of fermentd wine is uncorked and sugar to the mount of about two per cent is put in, great care boing taken in the exact quantity. The bottle is then recorked. The corms of fermentation, or wine fungue, still remainng over from the previous fermentation assert themselves, and acting upon the sugar produce carbonic acid, which is the sparkling element or gas. After this protess has been fully wrought, the contents telies of the disturbing material may be In the course of this process fifteen per the old method be bottle's neck cleansed the vacuum is pletely avoided in the new mode of manufiled with a solution of sugar, Cognac and facture, and thus another very considerable trong wine and the bottle recorked. It is item of expense is eliminated.

manufacture consumes from seven to twelve months and requires much labor and space.

For one hundred and seventy years no A new method of making Champagne has essential modification of the original medbeen discovered here in the city of Stutts of manufacture had been introduced until gart, which may have the result of revolu- the recent discovery of Mr. Adolph Reihlen nonizing the business and effecting a con- He has discovered how to make genuinsiderable reduction in the price to the consechampague from wine in which no germs samer. The process has been subjected to of fermentation remain, and has not only a test of three years under the immediate reduced the time required for the manufacsupervision of the discoverer, and the ture from eight months to forty hours, but Champagnes of his magnifacture have eliminated entirely the introduction of dready a large consistency in parts of Ger- foreign materials, such as Cognic, tannin I sy where they have become known, and and alum. The essential thing in the manutheir merit has been recognized by high facture of champagne is the production of carbonic and from within the bottle by a As is well known, Champague is a spark, second process of fermentation brought ling wine produced by a special process from about by the action of the fermenting germs ordinary wines. The rapidity with which upon the sugar. All chemists had considt exhibitates the blood and stimulates the ered it impossible to make genuine chamsystem, together with its delicately sweet pages from other than young wines, that maste, makes it the most popular of wines is, wines less than a year old on the ground The district in France which has given the that there alone live fermenting germs still name still produces the grap from which exist. These germs are essential to the he most famous brands are made. The production of the genuine article. Mr. communiscent places among the choicest Reibbu's liscovery does not do away with wines of this sort, Venye Clicquet. Rose, the germs, but makes champague out of lerer, Mamm, Holsick and Due de Monte- old wine where no such germs exist by the bello. Large quantities of genuine and infusion of germs. The discovery was at excellent Champagne are made in Germany, first treated with incredulity in all quarters,

Mr. Reihlen's discovery and invention were after this wise. In 1833, Schwann ishments. The process of making cham-discovered that the germs or fungi, which pagne was discovered in France, and made are the active agents in fermentation, exist within the less or deposit of the wine, are distinct substances, are plants of the naturpopularly called "Devil's Wine" or "Cork of a parasite, of the shape of an egg, and in size infinitely small. The old principle was. No lees or deposit, no fermentation.

Mr Reihlen has discovered that these method requires a tedious and skillful pro- germs or fungi are not confined to this substance or dependent upon it for life, but with the wine of the previous fall. Gene exist everywhere in the vegetable world and tine champagne could, until now, only be can be easily precipitated from the air upon any vegetable fibre, as for example lines terms of fermentation still exist. These threads washed in sugar water. By the simple use of wood fibre, say sawdust and sugar, he produces fermentation, and has overthrown the theory that the deposit of fermented wine is essential to the production of the second process of fermentation, From the very important discovery, which probably has applications in other departments than the manufacture of champagns he went further to invent a simple and vet efficient machine, whereby, through the introduction of the fermenting germs and If the bottle present a thick and troubled sugar, old wine is turned into champagne ppearance, which is due to the collection in a few hours. No other substances of deposit on the walls of the bottle, and whatever are added, either to effect the the next stage is to clarify them. This is a change, to clarify the wine, or to give it ong and delicate process. Each bettle the delicate champagne color. It is saying must be handled separately from a hun- very little to say that to the average contred to two handred times, and that all summer the Reiblen champagne, or S boromoccor, as it is called in German, has the removed from the glass to which it clings, same agreeable taste and the same effect as aunin and alum are my cool. The bottle the champagnes made by the old method, winclined a little on one side, and the in- The simplicity and rapidity of the process clination is increased gradually until it is so materially reduce the price of manufacstood up with its nick downwrid, the object, ture that the price to the consumer is very being to draw all the deposit to the cerk appreciably less than champagne made by

lent, and often as many as twenty-hve per. At Stuttgart it costs in the store thirty to tent, of the bottles burst with the intense thirty-five cents, one mark ten plenning to pressure, and the contents are a total loss, one mark twenty-five plenning only twenty When the deposit has all been precipitated to thirty per cent more than the wine from to the cork, the last stage in the process of which it is made, and one-fourth or onemaunfacture occurs. The cork with the fifth as much as champagne of the old deposit is removed and the misib wails of manufacture. The loss of bottles is com-

hen ready for the mark t The actual Some of the foremost medical and chemical alarge portion of grapes gathered will be to a laptism into a new religion.

cal experts of Germany, such as Dr. Kussmaul, of Strassburg, and Dr. von Pettenkofer, of Munich, have subject the Reiblen champagne to tests and analysis, and have beclared it in print "to be composed of pure materials and to correspond in the strength of the carbonic acid to the best French and German brands, and statthat "materials prepulseral to the health are not used in the manufacture. * It has been adopted in the hospitals of Stattgart.

The prejudice with which all new things have to contend has been brought to hear against the Rahlen champagne. Its consumption, however, has grown with great rapidity. The first bottle was sold in 1885. and the sale the first year reached flow bottles. During the last six months 10,000 bottles a month have been sold in Stuttgart and vicinity alone. In 1887 the monopoly for Germany was sold to a company of capitalists headed by Boshin, Wirks have been erected in Wachenheim near Mannheim. At first a machine was used which turned out 100 bottles a day. In 1887 the capacity was increased to 300 bottles, in the following September to 1,000, in May 1888, to 1,500 bottles, and by the close of September the daily capacity will have been increased to 6,000 bottles. This new champagne is made from the common Rhine Neckar and other German wines. It grows better with age, and, it is asserted. loses none of its sparkling character,

Mr. Reihlen's observations were begun in 1876. He has never been a wine producer or wine dealer, but has found leisure under the great strain entailed by the management of a large sugar manufacturing inlastry to study the processes of nature, and to pursue enemical experiments. He is a man of wide culture, of high standing for many years in the community where his life has been spent, and it is well known for his benevolence both in and out of Stuttgart, He is of the opinion that his invention will promote the cause of temperance by the partial substitution of a pure hampagne, free from spirituous ingredients, for other alcoholic beverages. He has taken out patents in all countries of the world, including three in the United States, which country he visited a number of years, ago. He has disposed of these patents in some of these lands. A few weeks ago a ease of California wine reached him which in a short time was on its way back again to New York changed to champagne. The writer was told that its taste, body and sparkling quality were fully equal to the Ir nch champagnes. It will be very surprising if some enterprising American firm loes not secure the patent for the United States from the German inventor, or join him in the production of American champages by the new process. λ, λ

Starbjert, Germany, Sept. 1, 1888.

WASHINGTON WINE NOTES.

F. Pohndortt & Co. in their column of Graps and Wine Chat," in the Washington, D. C. Sunday Herald, says.

Mr. Crabb writes of the vintage . "The rep has been shortened very much by the drought and sunburn and will not be any larger than that of 1883. Two works of dry, hot weather late in Angust causes all the exposed banches of grapes to upon prematurely, or rather to dry on the vines befor they are fully ripe, and raider them unfit for making good with. Not only is the graps crop proper greatly basened, but to drive them by hordes through the rivers

only fit for the brandy distillary. The conthat list war the crop suffered in the s way induces the growers who can off oil to lo so, to hold all Ligh-grade mature wines for bieler prices. In the mean time we can report the constantly-growing popularity of our own home-grown wines. 13, y are gradually but surely taking the place more expensive and for the mest part fraudob at foreign wines, as well as that if both malt and distilled liquers.

It is doubtful if any law or restaute ould materally change the bonard roomsumption of alcohol in some form. The usof beer may be sen the sal of lestilities or the cheap tess and good quality of weeters less in the same of ferments I and distribute liquors, but in one way or an ther ten will cat and drink what their appetite craves. It may be interesting and perture at to examine car fully the following table, compiled from the report of the Commissfor of the Internal Revenue, showing the consumption of distilled spirits, winand malt liquors, how the proportion changes year by year and amount per capita, as compared with that of the years of 1840. 1850, and 1860, previous to the heavy tax imposed by the necessities of the war-

In the 47 years the use of distribed spirits has gone down from 2.52 gallons to 1.10 Wine has increased from 20 gail as to 50, while malt liquors have advince I from 1.36 gallons to 11, 9, Total in 1840, 4.17 gallons; 1887, 13,08 gallons. N twithstanding all the changes of hard times and good times. war and peace, free sale, of high tax, who is computed on their inherent alcoholic force, the consumption of alc holic beveriges has hardly varied at all.

There are cvil-ness that the use of malt liquors has reached its culmination. "Besure your sin will find you out ' is nowhere more clearly proven than in the history of trade. The rapid adoption of beer in this country has proven too strong a temptation to the cupidity of the manufacturer, until the fact of extensive a lulteration in some cases has induced a lack of confidence multibrands of mult liquers, which doubtiess will increase unless we can have some stringent regulations as to the standards of strength and purity like those at present in force in Germany.

Tacitus gives up the ancient to rman as a lusty, strong creature, whose principal bosiness in life was fighting, drinking meal and ale, and raising stalwart sons and daughters. The Latin Priest brought the vinuntil it laxuriated on every hill side and in the fifteenth century sold at the rate of five cents the pariful, becoming the common drink of the proph. The great influx of silver and gold from the N w Werld made money cheaper and wine dearer so that carry in the sixteenth century stringent laws against adults ration were charted. In some cases adulterators of wine wer publicly beheaded for the offense. Still public condence was shaken as to purity, and again we find them returning to malt ir port.

In Worternburg in the sixtenth century the wine-growers complained lendly against the invasion of beer, and the brew in swer simply suppressed to please the lowers of the vineyards. Prohibite is is not new, it is quite an old fallacy on to wiground. It is a questi in which would went more ride u lous to the German of to-day, a law probbiting the manufacture and sale of beer and wine, or the advent of a second Churb heazte

LIVERMORE VINES

The history of the Livermore vine district is interesting in the fact that for years while nearly every other section of the State was boasting of its vineyard soils, and nearly all the "sunny slopes" and "sheltered valleys," in the "thermal belt," from Shasta to San Bernardino, were purpling with the 'luscious clusters,' this region was regarded as ntterly without worth for orehard or vineyard purposes. Until within five or six years it was considered that grain was the staple of the valley, and upon grain the farmers based all their faith in "a great future." It has been a fortunate circumstance for Livermore that her soil suffered in comparison with the rich alluvial deposits of Eden township, and it was still more fortunate that the vagetable garden of Portuguese and the Chinaman has never been able to take root in the rich ado be, the lonmy gravel, or the calcarious soil of this section, for in that case the vine would never have been planted, the fig and the olive would never have been thought of. and men with brains and capital would never have come to make this region per manently prosperous.

"And it was not the ancient farmer that first learned the capabilities of our soil," aaid an old resident of the valley. "It was not the man who placed his faith in big crops, and took his chances on droughts and consequent debt and a three ply mortgage. It was the white faced clerk, the scientific husbandman, the man of small means and wide information, that first appreciated the fact that products more valuable than those called 'crops' could be raised here.'

The oldest vineyard in the valley was owned by A. Bardolini, and comprised about ten acres. The vineyard was situated ahout two and a half miles south of Livermore, and while Bardolini was the owner it flourished as was natural, considering the excellence of the soil in which it was planted even though it was not subjected to the superior cultivation of modern methods. Bardolini sold his place and the vineyard, uncared for, was choked with weeds, and the grapes deteriorated year by year until J. H. Taylor, Superintendent of W. T. Coleman's Marin county ranch, bought eight acres, and began his experiments. The vintage of 1880 yielded \$900 worth of grapes, and in the following year the vineyard produced \$1,100 worth. This encouraging result induced others to purchase land in the vicinity for orchard and vineyard purposes, and quite a colony sprang up around Taylor's ranch, which in 1881 included sixteen acres. Joseph Black owned considerable land south of Livermore, and through his enterprise many vineyardists were induced to make the same experiment that had resulted so successfully for Taylor. Black himself planted thirty acres, making a total of fifty-two acres in vines in the Livermore valley at the close of 1881. Then Charles A. Westmore made a critical examination of the soil, and pronounced it eminently fit for vineyard and orchard purposes. Since 1881 over 5,000 acres have been planted in vines, and during the last three or four years the average planting has Leen from 600 to 800 acres per year.

There are a dozen men resident in the Livermore yalley who have steadfast faith in the future of the section as a vinegrowing, winemaking, fig and olive hearing region. They are enthusiastic in their belief that this portion of Alameda county is destined to stand at the head of any section of the State in the production of these valua- ties planted, system of pruning, and the from Santa Clara county,

sistently advertised the advantages of the valley, and who has contributed largely to its present wealth and prosperity, is W. P. Bartlett. Mr. Bartlett has for several years publishes the Livermore Herald, one of the best journals in the interior and a newspaper in every sense of the word, reflecting as it does the capabilities and advantages of the section covered by its circulation and patronage. Mr. Bartlett is a practical man and his enthusiasm is not of the visionary sort. He knows what he is talking about, and he has either demonstrated the facts be published or has seen them demonstrated by practical men. He has brought a great many men into the valley and induced them to settle there, and most of them have proved of direct and immediate benefit to the community. He has handled a vast amount of property, and he estimates that over a million dollars' worth of land has passed through his hands since he has been interested in this section of the county. Another man who has accomplished great results for the Livermore valley is Charles A. Wetmore, whose orchard and vineyard at Cresta Blanca was described a few days ago in the Tribuns. Mr. Wetmore is also an enthusiast and his confid ace in the future of this region is unbounded, although he is content to await the result which he claims is by no means yet attained. In fact, the product of the past five years he considers simply in the light of a successful experiment upon which the results of the future will be based. John P. Smith, the owner of the famous Olivina vineyard, is another enthusiast who has substantial reasons for his enthusiasm, and who has not hesitated to expend thousands of dollars in his "experiment." Mr. Smith has placed Livermore wine on the market that has compared favorably with the vintage of the old world, and in his depot in New York more of the same quality is now "aging" for future comparison, when, in fact there will be no comparison—the Livermore vintage will "age" to better wine. Others who have contributed largely to the fame which this section is steadily attaining, particularly as a winegrowing region, are Howard Black, Crellin of Oakland, A. Duvail, Wallace Everson of Oakland, D. T. Fowler of Oakland, J. H. Wheeler of Melrose, at present chief executive officer of the Viticultural Commission, S. Osterhout, and J. A. Rose of Pleasanton, all of whom are compelling the soil to produce its best and pointing at the result with commendable pride while urging others to go and do likewise.

The cost of a vineyard in the Livermore valley is not nearly commensurate with the products according after it is in full hearing. If "white faced clerks," as they have heen termed, were able to provide themselves with homes in this faithful region, and accomplish this end by means of the surplus of small salaries, surely others, with equal energy and ambition, may do the same. Farming, in California, is undergoing a change. It is no longer necessary that an orchard or farm should cover a township to be profitable, and experience has demonstrated that a small acreage thoroughly cultivated is more remunerative than many acres only partially cultivated. It is the small farm that will eventually prove of the greatest benefit to the State, The cost of planting and caring for a vineyarn until it is four years of age will depend greatly upon the soil, climate, varie-

ble commodities. One man who has per- facilities of the planter for doing the work In the Livermore district, where the soil and climate are admirably adapted to the these came from Napa county, three from rapid and healthful growth of the vine, and where there are no floods or other extreme freaks of climate to prevent labor in the vineyards at all seasons of the year, the cost of bringing a vineyard into bearing is much less than in those sections of the country where nature is more adverse to the enterprise. He who resides on his premises. owns his team and implements, and gives his personal attention to the work, at the proper time and in the proper manner, can do the work better, and at much less expense, than he who hires it done. The cost of bringing a vineyard through four years with hired labor is about as follows: First year, preparing the ground, cuttings, plowing, and cultivating, \$20 to \$30 per acre. Second year, plowing, resetting vines, pruning, staking, and tying up, from \$25 to \$40 per acre. Third year, plowing, reset. ting, pruning, cultivating, tying up, and sulphuring, from \$15 to \$25 per acre. Fourth year, plowing, resetting, pruning cultivating, sulphuring, and tying up, fron \$18 to \$30 per acre. The cost will vary more or less with the different systems of planting, pruning, and staking. Many vine yards yield sufficient the third year, and all yield enough the fourth year to pay the expenses of cultivation for those years respectively; and beginning with the fifth year, a vineyard properly cultivated will produce an income over all expenses, varying, of course, with the care bestowed.

The most thorough and impartial test of California wines was made under the direction of the State Viticultural Association March 7th of the present year, during the annual State Convention held in San Francisco. The Committee of Experts on Win-Exhibits was as follows: R. J. Harrison, A. G. Chauche, H. A. Pellet, George West, J. A. Stewart, A. Erz, J. Chamon de St. Hubert, William Palmtag, O. C. Melver, A. Schell, H. M. Larue, and H. A. Merriam. This committee virtually tested the wines submitted to them blindfold, not knowing what vineyard they came from or to whom they belonged. The following extract from A. G. Chauche of San Francisco, John the committee's report will speak for itself:

Total number of wines exhibited, 460. Of these quite a number were not tasted, owing to the want of time. Of the wines tasted there were twenty-nine that were considered "Extra," that term being applied to those wines that all of the committee considered to be No. 1. Of these twenty-nine "Evtra" wines Alameda county is credited with fifteen, Napa county with seven, Santa Clara county with four, San Joaquin with two, and Fresno with one.

Of the wines considered "fine" types there were eighty-six. Of these thirty-four came from Alameda county, thirty-one from Napa, five from Santa Clara, four from Santa Cruz, seven from San Joaquin, two from Sonoma, and one each from Merced. Los Angeles, and Fresno.

Of the Zinfandel type, there were fortynine samples. Three of these were considered "Extra" and they all came from Alameda county; sixteen were "fine" types and of these Alameda county turnished eight, Napa five, Santa Clara two, San Joaquin one.

Of the Cabernet (Medoc) wines, there were twenty-one samples, and five were considered "Extra." Of these "Extras" four came from Alameda county and one

Among the white wines there were eight that were considered "Exrra." Four of Santa Clara, and one from Alameda coun-

It will be seen from this report that Alameda county furnished more "extra" and "fine" wines than all the rest of the counties combined

GRAPE ROT.

This year has been remarkable for the prevalence of the rot in grapes, says the Farm and Vineyard, many remedies the were thought to be very successful in other years have tailed to be of any use in the

In some connection the fruit has been almost entirely destroyed by rot, and varieties that were formerly considered very free from it have this year suffered with the rest. This disease is caused by the growth of a small plant. In a damp or moist's ason or even in a dry one, when fogs and heavy lews are prevalent and the weather warm, t will rapidly develop into the rot,

There are many forms of the fungi which iffects the grape, producing the rot. Von Thurman describes about 300 that trouble the grapes in Germany, and from the great prevalence of the rot this year we should presume we had equally as many. The Phonoa Unicola is the most general cause of the rot, the spores of which exist every year in vast quantities in the air, ready for a suitable season to find lodgment and growth. The most favorable conditions for this is warm, damp nights and mornings, when the spores lodge upon the damp sorinces of the leaves and grapes, and find moist and warmth enough to sustain them until they gain a foothold, and when once established it is impossible to eradicate them. Hence, all vineyards that are usually free from heavy fogs and dows are less effected than others. Grapes growing upon trees and sheltered by the leaves from dew, as well as those that are covered, suffer but little. Covering is sometimes done by making a small roof by nailing a few boards on top of the trellis, over the vines. This keeps them free from dew and regards the growth of the spores of the faugi and protects the vines in a great measure from the rot. Placing the young bunches of the grapes when very small, into paper bags and pinning the bag to the: vine well, when done early enough, i e., before the rot gains a foothold, guerally protect the grape from these pests.

NO DANGER FROM POISONOUS SPRAYS

At a meeting last month in Cleveland, 0., of the Society for the Promotion of Agricultural Science, an exhaustive paper was read upon the use of sprays containing arseoiles in controlling the ravages of curculio in & plum orchard. After reciting the great good accomplished in eradicating the pests, the results of experiments were given as to whether it was dangerous to eat fruit so treated. Quantities of fruit were carefully washed and tasts applied to detect the presonce of arsenic, but without even the most minute quantity being found. Even when no rain has fallen to remove any of the poison which might possibly adhere to the fruits, it seems clear that no damage can result. If the spraying is not done for less than a month before ripening, the projonged exposure to the sun and air volatilize the arsenic and removes all traces from the fruit,

OLD WADEIRA

We are indepted to B infail's Circular for the following interesting statement about the vintages of Madeira:

It has been represented of late that old Madeira is going out of fashion, and in support of that assumption some statistics have been quited from the report of Consul Keene, of Maderra, to the Marquis of Salisbury. Mr. Koone asserts that in 1887 the total exports of Moleira wine was 3800 pipes, showing a d crease as compared with As e return of 1886 of 843 pipes. The consal refers to the difficulty he had experienced in obtaining the statistics from the Custom House, notwithstanding frequent and urgent appeals. This circumstance may explain the liser pancy between his figures and those which have been applied to London agents by the shippers in the island. It is admitted that there is as tend nev towards lighter drinks, charcts, hocks, and champagnes having, during the last quart r of a contary, displaced sherites to a considerable extent; but in regard to port, there is probably as much consumed now as at any previous period. Sacrry has n ver recovered from an attack upon it by som om died min. Millara, however, stands in a different position. It is a wine with a history, and these who are interested in the wilflore of the island which produces it are naturally in hencet that it should be prejudiced in the eyes of the public and the very menent when a scand and cheap vintage is about to be off red for household consumption. Of coarse wine which can be sold at 1s, 61, and 2s, per bottle retail is not, correctly speaking, old Madeira, it is of a lighter d scription, coming well within the 1s duly rate. Since 1885 the strength has been much reduced, and last year more than half of the total imports of Madeira did not exceed 30%. It is true that the export trad is steadily decreasing, the fact being that for the first six months of 1888 the shipments have already reached 3636 pipes, the correct total for 1887 having been 4247 pipes, and for 4886, 5227. These figures are small (nough when compared with the averages of the years from 1788 to 1838, during which tim the wine may be said to have had its day. There were especially reasons why at the time of the Peniusular war the wine of Madeira should have been substituted for sherry, which was not obtainable from Spain. In the glorious days of Nelsou's victories at Copenhagen and at Trafalgar, Englishmen delighted in a wine, the str-ngth of which was then no small part of its recommendation. The Madeira of to-day is not identical with the beverage drunk by our grand farthers. but there is still some of 1815, the oldest in the market, to be had. The largest exports were recorded in 1800, 16,981 pipes; in 1801, 16,732 pipes; and in 1807, 16,700 pipes. In 1801 the island was taken by the English, and in 1807 it was again captured by them. British tars for, at any rate, their officers -were familiar with the quality of the wine; for an old bill of Juling shows that my Lords of the Admiralty were accustomed to order it for victualling his majesty's navy so long ago as 1703. In the quality worked doenment, which is still preserved, they supulate that a cargo intended for Barbadocs, per the good ship Providence, should consist of 2 120 London made pip's bound with 12 iron hoofs each, both heads painted dark chocolate bolor, and branded upon the heads, and spaggets, N. G. 1, " The original of an order of 500

ported to London: "There are not 100 | giving color to the stores, which may occupipes of old wine in the hands of the natives for sale; the exports of the year the wine by sending it in a heated tempera-1800 exceeded all previous exports, being ture to the West Indies and back has had upwards of 17,000 pipes, and should the demand for our wine increase as much as it has done for som - years, the island will not beable to supply the requisite quantity. During the succeeding quarter of a century the demand was fairly maintained, rising in 1825 to over 14,400 pip s, but in the following year the export fell to 9398. A decline, occasionally broken by a good year however, set in, and the totals more than once were short of 6000. In 1851 the aggregate was 7301, and that number has never since been attained,

It was in 1852 that the wine of Madeira was at a crisis of its history. The vincyards were devastated by the oldium, a fungus which attacks the grapes when the skins are very tihn. For eleven seasons not a pipe of wine was manufactured, and the stocks were gradually depleted, although the exports were reduced to less than, 1000 pip s per annum. High prices were asked until 1865, when the value of the wine was almost at its highest, although it was in 1816 that the largest figure, was given for "London Particular," The price in 1865 was double the quotation of 1797, which may be taken as applying also in 1888, as there is not much difference It took more than ten years to discover that the fungus could be treated with sulphur, and since then the vintage has by degrees been to some extent recovered, a steady improvement having been especially noticeable since 1879. A trade subject to such fluctuations owes its preservation to one or two heading houses. In the good old times, when the East and West Indiamen, outward bound, called at Madeira. there were quite thirty English firms, each of which had its own flag. Their number has now been reduced to five or six. Whenever the ships hove in sight and displayed the colors of the merchants there was activity at Funchal, the capital of the island, to prepare the freights and to entertain visitors. Those times have gone, and no skipper now would consign his wine per a vessel which was bound to complete a yoyage to the Indies before it could sail for home. A cask of Madeira which had been carried around the world and matured in the hot atmosphere of the hold was a priže indeed. There is not the same romance, but there is something of interest about the Maderra wine of to-day.

It is the soil of the favored island which gives character to its grapes. The districts of vine culture fringe the coasts, the interior of the island rising to mountain peaks of 5000 feet and 6000 seet altitude. Different varieties of grapes are grown, but the Malinsey, Sercial, and Bual are termed specialities. They, as well as the l'inta, a small black Burgundy, are giving way before the Veid lbe, "a small oval grape, hardily as large as a coffee berry, when rme of a rich golden has, full of flavor and saccharine.

The produce of a vineyard is frequently purchased before the grapes are pressed. The "moste," or raw wine, is transported to Punchal in Canteiro pipes, holding 130 gallons each, old measure. These great barrels are drawn about by oxyen yoked to a kind of sled. Fermentation goes until November, a small quantity of brandy being added. The stores in which the processes are carried on are of most pictures-

py several acres. The method of muturing to give place to a more practical system. In the country districts it is still the customto put the butts in the open air under the direct sun, or store them in a glass house with the same object. But the large ships persone provided with estufas, or building of two stories, divided into two compartments, "In the first of these," an eye witness relates, the aminon wines are subjected to a temperature of 1105d grees Palueus but -derived from thmes, heated with anthracite coals for the space of three months. In the next compartment wines of an intermediate quality are heated up to 130 degrees for a period of four and a half months; while the third is set apart for superior wines, heated variously from 110 to 120 degrees for the term of six months. The fourth compartment, knowns as the carol, 'possesses no flues, but derives itheat, varying from 90 to 100 degrees, exclusively from the compartments adjacent; and here only high-class wines are placed. The object of this heating of the wine is to destroy whatever germs of fermentation still remain in it, and to mature it more rapidly. in order that it may be shipped in its second and third year without any further adeition of spirit. Each compartment is provided with double doors, and after it is filled with wine the inner doors are coated over with lime, so as to close up any chance apertures. When it is necessary to enter the estufa the outer doors only are opened, and a small trap in the inner door is pushed back to allow the entrance of the man in charge, who passes through the various stacks of casks, taping them one after another to satisfy himself, that no leakage is going on. On coming out of the estufa, after a stay of a full hour, he instantly wraps himself in a blanket, drinks a tumberful of wine, and then shuts himself up in a closet, into which no cool air penetrates." During the time the wines are in the estufa they diminish by evaporation 10 to 15 per cent. The wine is put into butts, each holding 400 gallons, and when ready for shipment is transferred to casks, which are made by coopers with the adz, of American oak staves, and cost perhaps £2 apice. The casks are measured, branded, scalded and steamed. They are seasoned with water, and then charged with common wine for two or three months. After this careful preparation they are considered fit for use. Whilst a quantity is sent to Eugfand for home consumption, it is stated that the people who drink most Madeira are the Prench, although until recently the were rivalled by the Russians,

. . . A REMILDA FOR DIPHTHERIA

Line water is an admirable remedy in cases of diphtheria. Its local effect is more useful in eleansing and purifying the fauces, and its mode of application is the casiest imaginable. It requires no spray apparatus, no douching, and no effort at gargling. It is sufficient to have the putpart slowly swallow a te ispoonful or more every hour, in order to get good results from its us . This fact is of the greatest importance in treating children, who are too often cruelly tortured in the attempt to make local applications to the throat Lame water can be coven easily, and is taken readily by children; and there are pipes for Savannah can be seen dated May, | que apperance - trellised vines stretching | we believe, few cases of diphtherm which

1870. In 1801 the agents in the island re- from shed to shed, and searlet geraniums require a more energetic local treatment than the one just described. In fact, we think that an early cleaning out of the bowels, with caloniel sometimes in massive doses, followed up after a short interval by the administration of the lime water and the use of a suitable tonic and relevant regimen, constitutes a method which comes the nearest to being of universal applicalculity of any one with which we are familiar, and we think that the use of the lime water is of more consequence than any other part of the treatment, except it by the preliminary jurgation, - Medical and Sorgical Report i.

WHAL A TON OF COAL CON-TAINS.

A careful analysis and estimate made by a New York chemist of the constituents of a ton of coal presents some interesting facts, not familiar certainly to unscientific minds. It is found that, besides gas, a ton of ordinary gas coal will yield 1,500 pounds of coke, twenty gallons of ammonia water and 140 pounds of coal tar. Distillation of this amount of coal tar gives about seventy pounds of pitch, seventeen pounds of crevsote, fourteen pounds of heavy oils, about nine and a half pounds of naphtha yellow, six and one-third pounds of naphthaline, four and three-fourths pounds of naphthol. two and a fourth pounds of alizarine, two and a fourth pounds of solvent nephtha, one and a fifth pounds of aniline, seventy-nine hundredths of a pound of toludine, fortysix hundredths of a pound of anthracine, and nine-tenths of a pound of toluchesfrom the last named substance being obtained the new product, saccharine, said to be 230 times as sweet as the best can sugar.

PICKING AND PAUKING GRAPES

In a recent issue of Vick's Magazine, a grape grower describes the careful manner in which grapes are picked and packed at an establishment in Chautauqua county, N. Y. The work is done by careful girls. The pickers are not allowed to touch the bunches with the hands, but to handle them by the stem. In packing, the cluster is lifted with the thumb and finger of one hand, and with the sharp pointed grape scissors in the other, all green, imperfect and bruised berries are deftly and rapidly removed. The bloom of the grap s is thus pertectly preserved. Of 10,000 baskets sold last season, the average weight was \$7-10 pounds per basket. The packers soon learn to place in the clusters so as to fill the baskets even and level. The Concord is never fit for hipping long distances without being carefully picked and then wilted before pack-

CORPLESS APPLES

Horticulturists are now undeavoring to broad out the troublesome core from apides. We quote from the New York Tribone, "Two eases lately put on record of seedless sorts of apple one of them represented as a large and good winter variety- come directly in class with Professor Claypole's proposition to broad out the troublesome core from the best of our fruits. It is worthy of attention, especially as the trees are much more exhausted by the production of scals than by that of their development, and usually the more seeds, the less of the catable pulp and the harsher its quality,"

Subscribe for the Merchant

BRAZIL AS A FIELD FOR EMIGRA TION.

The Belgian Minister at Rio de Janeiro, in a recent report to his Government, makes the following remarks on the subject of Brazil as a field for emigration:

"It is into the province of St. Paul that the immigration of Europeans should be encouraged. For three years a daily increasing number of foreign laborers, mostly Italians, has been pouring into this province.

"St. Paul, which is situated to the south of the Empire, and bordered by the provinces of Rio, of Minas-Geroes, of Matto Grosso and of Parana, has an area of 312,-283 square kilometres. Its population is computed at 1,400,000 only, the latter including nearly 200,000 foreigners, mostly Italians, when in proportion to the countries of Europe, it could easily support thirty millions. In the northwest region, vast territories occupied by the Indians are not yet explored.

"The climate is generally very healthy. The thermometer averages 19° centigrade (66° Fah.). The temperature is higher on the littoral, where, in the summer senson, it rises to 25° and 30°, and even higher. The sanitary conditions, therefore, not quite so favorable. Yellow fever sometimes makes its appearance, but in the endemic state. This malady has considerably absted in Brazil, where it no longer exists except in a few seaports.

"The Brazalian yellow fever, of which people make a bugbear in Europe, is less to be feared than the cholera or typhus epidemics. It is limited to within a few zones of the coast, and never shows itself at a greater distance than fifteen leagues from the sea. Most of the cases are due, moreover, to the imprudence of the victims, who neglect the precautions recommended to ward off its attacks.

" After the passage of the Serro do Mar, at an altitude of 850 metres above the level of the sea, the climate of the province of St. Paul may be cited as one of the best in the world, equal, and even superior, to that of central France. The soil is of astonishing fertility, and in the temperate zone produces in surprising abundance most European products. By reason of the immense extent of its territory, no country offers a vaster field of activity for the labor of man. The numerous streams contain a motive power which only requires to be utilized to the profit of industry. The climatic and other conditions render its soil suitable for every description of cultivation.

"The capital of the province is the town of St. Paul (San Paulo), situated in 33-33 degrees south latitude and 49 degrees west longitude. Its population numbers 50,000, of whom 22,000 are foreigners; 12,000 Italians, 6000 Portuguese, 2000 Germans, the remainder of various other nationalities-French, Spanish, Belgians, the latter to the proportion of one-fifth. It is the central point of the principal railways, and the scat of the presidency of the province and of the episcopate; possesses the first university of the Empire, with 1000 students; a large seminary, a tribunal, an agency of the public treasury, manufactories of cotton tissues, ices, spirits, chemical matches and gloves, a foundary, and even numerous details respecting the various a Belgian bakery.

" The province contains other important towns, such as Santos, Campinas, Jundiahy, Sorocaba, etc.

The principal language is the Portuguese, but the Italian is also much spoken, as well as the French and Spanish. ion of Brazil, but there is complete religious liberty.

"There are numerous ways of communication in the providence of St. Paul.

"The principal railway lines, with an extent of ovee 2000 kilometres, are the follow-

"English 139 kilometres, St. Paul and Rio de Janeiro 231, Paulista 242, Sorocabana 200, Dragantina 52, Mogyana 638, Rioclaro and Araquara 266, St. Jose do Pardo 72, St. Mauvel 28. Total, 2030 kilometres.

"In the town of St. Paul there is a society, having at its head M. Martinico de Silva Prado, and disposing of a capital of 500 contos or reis (\$423,000) for the transport of European emigrants to the province.

"This society gives a free passage from any European port to Santos as a destination, to every family of emigrants engaging to establish itself in the province of St. Paul, whether for agricultural purposes or

"The port of Santos is the place where the emigrants land. They are conveyed free of cost to St. Paul by the railway which ascends the Serro do Mar. The train deposits the emigrants at an immense hotel established for the service of emigrationr This place, where an admirable organization exists, can hold more than 1000 persons. New-comers are lodged there free of cost for eight days whilst waiting oflers of engagement, which are seldom wanting. It is rarely that, within three days, all the families of emigrants are not established. for after their arrival offers are made to them on all sides by the numerous owners requiring workmen. Hiring contracts no longer exist. There is a simple verbal engagement, the canceling of which on one side or the other is optional at all times. Emigrants have the choice between colonies created by the Government and private undertakings.

"At first they can, if they have the means, purchase a house and twenty-five acres of land for the sum of \$250 ready money, or for \$300 with four years' credit. They can cultivate the usual crops, and also work on account of the Government for a few hours during the day at the wages of 1000 rcis-about 50 cents-per day. But there is no obligation to do so.

"The three large colonial centres under the direction of the Provincial Government are those of Cannas, Cascalho and Ribeirao Preto.

" Other colonies not so large, but equally good, exist at Gloria, at St. Bernardo, at St. Caetano, at St. Anna and at Lorena; these are divided into lots, of which several are now vacant.

"Whatever may be the advantages offered by large colonial centres, it is desirable that, at the beginning of his settlement in Brazil, the emigrant should offer his services to a land proprietor, whether he does or does not possess the funds sufficient for the acquiston of pieces of ground. The Five laborers, of whom three women, 2800 reason for this is as follows: Newly landed in an unknown country he has to acquire an education. He must acclimatize himself, must learn the language commonly spoken, make himself acquainted with methods of cultivation, which differ from those in Europe, and finally must not exhaust in experiments the money which he will require later,

"Employed in large private plantations, he immediately earns a wage which allows lands varying according fo their situation per pint).

"The Roman Catholic is the State relig- him to provide for the means of existence for himself and family. He acquires the knowledge which he lacked, and can, without hurrying, seek the situation best suited to him, for he can leave at a day's notice the farm where he is provisionally engaged.

"In the fazendas a family consisting of several persons-husband, wife and children above ten years; that is to say, fit for work, earns sufficient to pay for maintenance and food, and effect savings. In these fazendas a substantial dwelling-house is granted gratuitously to the settler, which he can manage as he likes, together with about one acre of land, where he cultivates vegetables and cereals. Additional land may be obtained at an annual rental of 7-00 francs per 4000 square metres-about \$1,50 per acre.

"A healthy and active man can easily cultivate 4000 feet of coffee, the woman 2000, in addition to attending to her household duties. The elderly people and children furnish an amount of work in proportion to their age and their powers. Thus, there can be seen the fazendas families of Italians consisting of 15, 18 and even 22 persons — the grandparents, husbands, wives and children all working together happily and contentedly.

"The months of May, June, July, August and September, harvest time, require the settler to work every day in the coffee plantations. The remainder of the year leaves him sufficient leisure to look after his own crops, which largely provide his food, and from which he can also reap considerable profits.

"The average of the day's work does not exceed eight hours. The settler has the option of choosing the hours of the day best suited to him for fhe work he wishes to do-Each family has its house separate-can have a yard and keep pigs, goats and cows when means are forthcoming to purchase them

" To the emigrant without resources, the planter or fazendeiro supplies, during the first year, the things necessary for his subsistence-haricot beans, manioc flour, rice, lard, mest, salt and sugar, and even tohacco and spirits. But this is only an advance, which must be repaid out of future gains. It rarely happens that the settler has not grown, at the expiration of a year, the wherewithai to keep himself.

"The following statement shows the avverage carnings of emigrants, established on the basis of last year's returns:

Husband and wife (old), 1000 francs-\$200.

Husband and wife (young), 1300 francs-8260

Two robust single men, 1500 francs-\$300. A man and three children, 1600 francs-\$320.

Husband wife and child, 1600 francs-\$400.

Four laborers, of whom two women, 2000 france-\$400.

francs-\$560.

Three men, 2540 francs-\$508,50.

"If the emigrant, possessing a little capital, wishes to settle on his own account, he has plenty of suitable lands to choose from. It is difficult to fix exactly the price of these lands. The margin is very great, The minimum is 12.50 francs per two hectares 42 acres-fifty cents per acre-and rises progressively to 1000-\$33-and 1500 francs-\$50-and above, the value of the

and the kind of cultivation it is proposed to carry on.

"The foregoing information especially; relates to immigration for agricultural industry. If in the interior, in the country, the agricultural laborers are sought after to such a degree that in a few days 30,000 emigrants, consisting of families, can easily find work; others will also find employment in the towns, where there is almost always a demand for good cooks, domestic servants and artisans

"The liberal professions, or those of the scientific, commercial or artistic order, ar not referred to. For these the conditions are most exacting, the chances of success without guarantee, the competition by the native element being very keen.

They concern an entirely different order of things. It is a question here only of the emigrant properly so-called.

"The wages offered in the towns are high compared with those in European or American countries, including the Argentine Republic,

"The following statement gives some idea of these. In the province of St. Paul a day-laborer is paid from 75 francs—\$15 to 100 francs-\$20-per month, with board and lodging.

Kitchen-gardener, from 100 francs-\$20to 150 francs-\$30-with board and lodg-

Gardener, from 125 francs-\$2,25-to 200 frances-\$40-with board and lodging.

Baker, from 125 fraus-\$25-with board and lodging.

Hack-drivers, fram 100 francs-\$20--to 150 francs-\$30-with board and lodging.

Cook (man or female), from 100 francs \$20-to 150 francs-\$30-with board and lodging. Domestic servant, from 75 francs-\$15-

to 125 francs-\$25--with board and lodg-

Servant, from 65 francs-\$12.50- to 100 francs-\$20-with board and lodging.

Nurse, from 100 francs-\$20-to 125 francs-\$25-with board and lodging.

Seamstress, from 75 francs-\$20-to 100 francs-\$20-with board and lodging.

Carpenter, from 7.50 francs-\$1.50-to 12.50 francs-\$2.50-per day, without food or lodgings.

Shoemaker, same as carpenter.

Mason, from 6:25 francs-\$1,25-to 12:50 francs-\$2,50-per day, without board or lodging.

Stonemason, from 10:00 francs-\$2-to 15:00 francs-\$3--without board or lodging.

Saddler and harness-maker, 6:50 francs -\$1.50—to 10.00 francs-\$2—without board or lodging.

Machinist, from 1250 francs-\$250-to 3000 francs--\$550--per annum. The dif-

ference in wage is fixed according to merit. "The price of articles of food varies, but not to a very ereat extent, according to the situation and the abundance of crops.

"The average price of some of these articles may be approximately stated as follows:

Sugar, 0.82 francs per kilogramme (7 cts. per lb).

Lard, 1.18 francs per kilog. (10 cts. per lb).

Coffee, 0.66 francs per kilog. (6 cts per

Rice, 0.25 francs per litre (6 cts per pint). Potatoes, 0.25 francs per litre (3 cts. per pint).

Manioc flour, 0.12 francs per litre (3 cts

per pint).

Maize floor, 0 10 francs per litre (1 ct. per

Haricots, 0-25 francs per litte (3 ets. per pint).

Tobacco, 2.50 francs per kilog, (22 ets. per lb). Meat, 1:25 francs, per kilog, (11 cts, pe

lb) Churcoal, 25 00 francs per 100 kilos

(\$2,51 - per cwt.

Duck, 1 25 francs (25 ets.) each, Fowl, 1/125 frames (25 ets. each. Sucking pag, 7.50 frames (\$1,25) each. Goat, 7 50 frames \$1 50 cach. Sheep, 10,00 francs (\$2 each.

DON'T DIG UP THE VINES.

In conversing with viticulturists great and small we find there is a coming conviction that about hill the present average of wine grapes must come up in consequence of the low price of grapes and wine, and that is why we say as we do at the head of this article.

Four years ago when we first heard people talk about planting in California, about thro-fourths of those who expressed an opinion at all said that fruit planted had hern grossly overdone, and that fruit, which had to be disposed of at once, was a precarious crop to ruse, while wine could b kept from year to year, and grow more valnable all the time, the mercase in value being more than the interest on money. Those three-fourths thought the vineyard business was much safer than the orchard business. and many went into it.

Now it seems the whole thing is reversed. and the orchard men have received a steady profit on their investment all the time, and there are no signs of overdoing, while wine has been wonderfully low for two years,

Now the grape growers have two plans for relief, and to our idea, neither of these plans is consonant with mature judgment after careful study.

One is to dig up a part of the vines and plant to fruit. Another is to graft over the wine grapes into table grapes and raisin grapes.

There are enough table grapes now to supply the demand. Those who have them in good quality get a fair price for them and make some money. If they were suddenly increased in amount by grafting over several thousand acres of wine grapes that business would go to ruin also. Californians are too apt to go with a rush and a jam from temporary causes,

There are not too many vines of wine grapes; flut is not the cause of present low prices.

The trouble is right here; too many vines were planted in proportion to the number of wineries that were built, and that has made two troubles, yes, three. First, the lack of wineries made it in the power of those who had wineries to make a low price on grapes. Second. In haste to remedy this evil, winer ies were innerovised in all sorts of open sheds and buildings and with all sorts of cooperage, and all sorts of wine makers, and the result was a great proportion of poorly fermented and poorly eared for wine, ever so many gallons were troubled with milk sourcess and acetic acid, and had to b forced upon the market or sent to the distillery at once. Third, when wineries were built there was not sufficient cooperage nor money backing to enable them to hold their wine more than about a year, and the wine experiment that he put out about 1,500 themselves to place the remaining 1,170,000 rouble for each bottle.

see this, and sharp enough to know they could get the wine at about any price they had a mind to pay.

And now, just when there is a chance to emedy all these defects the wine growers think the way out is to dig up the vines or graft them over. These wine merchants get just as much for their three-year old wine as they did four years ago, when prospects were favorable to the grower.

H you plant fruit it will be four of fivyears before you will begin to get pay from that, and half the capital employed in planting and waiting for that will provide storage for wine and ways to keep the half dozen increhants from controlling as many thousands of wine growers.

Rather than sell your wine for a few cents per gallon to these merchants, estabish a co-operative agency in the East and at your wine go for the same money there, and by virtue of its very cheapiness introduce it into hundr 4s of places that now do not see a single lottle or eask of California ann. Once introduced it will sell at a caying pare

There will be a change in all this matter, and there are none too many vines now danted to supply the wants which the next four years will develop,

What we would do is to improve the op portunity to change worthless and inferior grapes into better ones by grafting, which can be done with loss of only two crops,

L t the planting of table grapes go on instins it has with a healthy increase to keep up with the demand, but don't rush on sevand thousand acres of grafts which you will wish were back again into wine grapes before two years are over, nor dig up vines which you are sure to wish back again before the fruit trees which take their places can come to bearing.

Continuing to plant the best grape lands to grapes and the best fruit lands to fruit all will be well, both with wine and fruit .-Santa Clara Valley.

OLIVES IN EASTERN BITTE.

W. E. Mack, of Paradise, Butte county. writing on the subject in the Rural Press says. As Butte county has been prominently brought before the public by its fine exhibit at the late Mechanics' Fair, will von please allow me space in your valuable paper to say a few words in regard to olive culture in the paradise plateau.

Not caring to engage in an interminable warfare against the black scale, and knowing that in Europe and the Holy Land the olive thrives best on the high dry lands of the mountain slopes, I concluded to experiment in olive culture on this plateau.

For the benefit of the readers of the Prese who are not acquainted with the topography of this section, let me state that this plateau is situated in the eastern part of Butte county, at an elevation of 1,700 feet. The character of the soil, (a fine red loam) the altitude and the rolling condition of the hand insuring perfect dramage, led me to believe that here was a soil and climatpeculiarly adapted to olive culture. Coming too late to prepare my land in time to plant trees in the spring of '77, I induced Dr. Jankins of Oroville, who has a time body of land here, to plant a small tract to olives. He put out 100 one-year-old rooted entrings of the Picholine variety, which made a wonderful growth. Last spring be was so well pleased with the success of his

Millet flour, 0.16 francs per litre (2 cts. ring of San Francisco were sharp enough to mere rooted cuttings of the same variety At the same time in March I planted six acres to one-year-old rooted cuttings of the Picholine and Mission var-ties, laying off the ground by the triangular method. The holes were 20 inches across by 22 inches deep, and 20 feet apart. I filled them with small stones about one half the depth, then finish d filling with rich top soil. had an excavation made with the hand sufficiently large to receive the roots of the cuttings, ear fully sifting the dirt among the time fibers, still using top soil. When the roots were meely covered. I poured about a quart of water in the hole to settle the dirt and exclude, then thushed filling and packed lightly - I only lest two per cent of the Missions, and that was probably ewing to the root system having been injured by being frozen hard in the box of sand in which they were rooted before they were shipped to me.

Of the Picholines I have not lost one per cent. I have never, in all my observations s ca a finer growth than that made by my trees this summer, some of them sending out shoots twenty-four inches in length, making two-thirds of this growth during the months of July and August. The trees had no irrigation or cultivation except three thorough hosings to the distance of about three feet around each tree. This winter I will the give ground between the trees a deep plowing, and will cultivate next summer the same as I did this Next March 1 will put out 2,000 more olives, principally of the Mission variety, as I consider them the most thrifty and vigorous growers. there are no fruit of any kind here, and the deciduous fruits of all varieties reach their greatest perfection, I am thoroughly convinced that olive culture on the Paradisplateau will be one of the profitable industries of Eastern Butte.

THE PANAMA CANAL.

The Stillist, of August 18th, puts the actual financial position of this concern very clearly before the public, and makes it very plain that the Bourses have before long to face the inevitable smash of the Company, and with it the total ruin of many hundreds of thousands. The saugnine temperament of M. Ferdinand de Lesseps seems to make him lose his judgment when he is deeply interested in any scheme, and his last public declaration to the shareholders, at the general meeting on August 1st, surpasses all his previous excursions into the regions of prophecy.

When the Parliam ntary Committee was sitting in May last to investigate whether the exceptional privileges of a lottery loan might be granted to the Panama Company it was elicited from the leading engineers of the work that the final execution of the Canal was impossible with the amount then asked for -viz., 600,000,000f., but that they hoped to advance the operations with this money so far that the feasibility of the waterway could be demonstrated to the world. M anathile the Lottery Lean was decidedly a failure, and the public took only sterous of the 2,000,000 bonds offers d. as was efficially admitted when application was made for a quotation on the Bourse of Paris. M de L sseps acknowledged, at the recent meeting, that many of the last Lettery Bonds had been paid up in full, and r discount, and that this would enable them to continue their work. At the same time he asked all those present to exer-

Lottery Bonds. The pressing financial needs of the canal would thus be provided for, and the "miscrable speculators" defied

M. de Lesseps carefully avoided mention ing that hitherto his estimates about the time of opening the canal have invariably proved erroneous, and that his promises, solemnly repeated whenever he applied to the public for money, were every time unfulfilled. He wittingly kept back from his shar holders the investigations of the Parliamentary Commission of May this year, and yet made hold assertions about the final execution of the canal, which he knew to be inconsistent with his own declarations and those of his principal officers before the Commission.

After this, it cannot be wondered at that many serious bankers, who hitherto relied upon the veracity of M de Lesseps, should grow disgusted, and abandon the whole enterprise as hopelessly impracticable, Meanwhile, some of the big Paris establishments have committed themselves very heavily; the Crédit Lyonnais, for instance, has recommended to its numerous clients all and every Panama issue so warmly that its standing and reputation would be decidedly jeopardised by the break up of the Canal Company, which cannot be delayed much longer. Such a smash would not involve a dead loss of capital of fully £55,000,000 sterling, but would cause a run upon some of the big Paris banks for the repayments of deposits- a demand which could not possibly be complied with, seeing how seriously and deeply they have committed themselves to the Panama enterprises. Here lies the great danger for the Paris Bourse, and a prospect of a repetition of the l'Union Gésérale crash,-

GERMANIZING WINES

According to the Scientific Review, champagne, as well as the other French vintages, is distinct to suffer heavily from foreign competition. Three causes combined to mjure French wines in foreign markets, the xcessive rates of duty, falsification and mnumerable imitations. As regards champagne, wine merchants across the Rhine now buy the results of the vintages in the vicinity of Epornay and Rhoims, carry them into G rmany and manipulate them on the most approved French plan. Thus they obtain a product which, although vastly inferior to the French champagne, is good enough for even many of their wealthy customers, who were previously in the habit of getting their wine straight from France. The German Government favors this traffic by imposing a tax of nearly 2 marks on each bottle of champagne which crosses the frontier, while the same wine when known to have been what is called by the writer of the article "Germanized," is subjected to a very light duty. The writer also points out that it is not only the French merchants who suffer owing to this "Germanizing" process, but the glass blowers, cork cutters, cellarers and workmen of every kind who are employed by the great champague houses in inyriads. The future prospects of the whole wine industry are in fact very glocing, and the worst of it is in the words of the same authority, they are not only the old and sworm enemies of France who strike this terrible blow at her industries, but also her future friends, the Russians. Wines are now manufactured in the valley of the Don, and they are often as good as the Trance brands of champing, while wine coming from France is tax d at more than one



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FRIDAY.....OCTOBER 12, 1888

THE ATTENTION of viticulturists is directed to a letter from B. F. Clayton, of New York, published in this issue of the MERCHANT. Mr. Clayton has been appointed special agent by the Department of Agriculture to collect a viticultural exhibit for the American department in the Paris World's Exposition of 1889, Mr. Clayton is to spend some time in the East, collecting samples from Virginia, Ohio, and Missonri, and as soon as this is done he will come to California, from which State the principal portion of the exhibit is to be gathered. He will accept wine, brandy, raisins, and other viticultural products, and all that will be shown will have a prominent place. California producers will do well to avail themselves of this opportunity to promote the interests of the industry abroad, by letting people see what can be done here with the aid of our "glorious climate."

THE EASTERN grape crop in many of the districts is said to be phenomenally large this year. The early varieties of grapes, on Lake Chautauqua, are now being moved forward to the city markets and the Concords will will yield an immense crop. It is estimated that the grape tonnage of 1887 will be exceeded by 2,000 tons. A very similar condition, and large increase of the erop, is indicated on the shores of Keuka, Seneca, and Canandaigua. It is indeed a phenomenal grape year, and if the crop is all harvested before the advent of the first bad freeze, it will be a cause for universal thanksgiving and congratulation, among the vineyardists in the Lake country of the Empire State.

IN REGARD to the Whitechapel murders which are at present agitating the people of Great Britain, the St. James Gazette savagely criticising General Warren's administration, closes the article with a prayer for a squad of New York detectives to give the London police a few lessons in the profession they have apparently unwisely chosen. What is the matter with throwing a few of our San Francisco beauties in to add tone to the brigade? They are about as smart as they make them—provided the reward is a big one.

The following are the latest foreign Wine Notes from Bonfort's correspondents in Europe.

In the Bordeaux districts of France, there has been a steady improvement in the weather, since my last semi-monthly review, the grapes thus being able to make considerable headway toward a normal state of maturity. Should this favorable temperature, devoid of an excess of moistnre, continue during the current month, the vintage would be imaggirated in the Gironde under auspicious circumstances. The year 1886 closely resembled this year; it did not give us anything extraordinary in point of quality, but a good merchantable wine. Perhaps we may in this respect even do better this year if September makes the amends hoped.

The district of the Lower Pyrenees is being flooded with Spanish grapes, getting across the frontier duty free. People who do not own vineyards buy them and make wine, which will render all the more difficult the sale of the domestic product.

At the time the bad weather set in in July the blossoming of vines in Rhenish Prussia, had been successfully accomplished in this district, hence the subsequent rains did not do much harm. September, so far a fine month, will decide what we are going to have in the way of quality; it will be advisable, however, not to pin expectations too high. In the Haardt Mountain District, grapes, it cannot be denied, suffered seriously in July and August. not only from the inclement weather, but from vine diseases; hence as a rule viticulturists there are the reverse of sanguine about the coming vibtage, even granting that Sep. tember remains as bright and mild as it so far has proved. Quality not up to standard is apprehended. In the Rhenish Hesse, with the favorable turn in the weather during the fortnight that has elapsed since my last report, a more cheerful feeling has September and October will have to do wonders to approximately obliterate the German wine regions.

The condition of vineyards in Northern Spain is satisfactory; the vines that have not been mildew-smitten are loaded down with fruit, and matnrity, favored by fine seasonable weather, has been hastened. In Aragon and the Riojas on the contrary the mildew has ravaged a good many localities, so that there will be a short vintage there, causing prices on the spot and to arrive to harden. The vintage of 1888, after making every allowance for the damage done by the mildew alluded to and the phylloxera at Ampurdan and near Malaga, as well as in Catalonia near Barcelona, will from present appearances not only exceed in quantity that of 1887, but in quality likewise, taken as a whole. As for the gathering of the crop, the vintage commenced in August in portions of

During ten consecutive days of tropical heat the grapes have suffered considerably in Angust in a number of localities too much exposed to the sunbeams in Portugal, where they have been burned and have shrivelled, but the vines as a general thing bend down under the load they have to carry in all places not contaminated by the phylloxera. In fact the abundance is such that the impression prevails, this year's yield will not be inferior in quantity to that of 1887. About quality nothing can

as yet be prognosticated. It should be remarked that the phylloxera has extended its invasion in a terrible manner; unless a vigorous stand be taken at Torres Vedras, the vines will be extinct in that region in a couple of years. The disease unfortunately spreads, despite the obstacles thrown in its way, so far.

The phylloxera, which has irresistibly invaded all portions of Hungary, has now also made its appearance quite close to the Rust vineyards, so far, fortunately, to a moderate extent merely. Yet, as may easily be understood, this circumstances fills the minds of proprietors with consternation. From this and unfavorable weather, the deplorable conclusion is arrived at that the 1888 vintage will not only fail to fulfill the hopes of a good erop being housed, but that the same will prove downight inferior both as regards quantity and quality, and this all the more as August has also brought us rain, a low temperature, and high winds. There is thus no more room for sanguine expectations.

An abundant Italian wine yield is in prospect, but proprietors find all outlet closed against them. Complete ruin is feared if to the unsold stock accumulation from last year there is to be added a fresh om without buyers. In the southern provinces the crisis is being intensified; the consequences of the commercial rupture with France are evidently worse than the most pessimist predictions that had been made. The situation is a grave one, in Apulia in particular, whose successive failure of the most solid firms increases the critical state of affairs.

The Southern Californian reports some splendid grapes crops in the vicinity of Lugonia. In one vineyard five year old Muscat vines are producing at the rate of a tray to each vine on the first picking. begnn to prevail among proprictors; still This is at the rate of a tray to each vine on the first picking or within a few pounds of seven tons to the acre. There is only consequences of the cold dampness which one drawback to this big crop, and that is characterized the summer months in the the lack of trays to handle it. The packers gather abovt 130 trays daily for which they receive three cents a tray. In another vineyard a crops of Muscat and Seedless Sultana grapes are being gathered, some of the clusters weighing nearly three pounds each. The editor further adds that it is an absolute fact that some of these vines have yielded fifty pounds each or a trifle over fifteen tons to the acre. He winds up with an affidavit that this is not "a newspaper_yarn,"

> LIVERMORE grape growers are in benanza. The crop seems to be going off at satisfactory prices. The first shipment is already on the way East consigned to the East Fruit Company. The same parties having purchased the entire crops of several varieties of J. H. Wheeler, owner of the Cordelia vineyard and of the owners of Oak Spring property. Mr. Wheeler's varieties are the Florence Tokay and Black Ferrara, sold at \$50 per ton, and the Oak Spring is the Black Morocco, at \$40 per ton. The company furnishes boxes and crates and does the packing. No other varieties unless it might be the Cornchon are wanted. In these, grape producers in this locality are demanding $3\frac{1}{2}$ for wine grapes and $4\frac{1}{2}$ for Muscats. This would equal \$20 per ton for the grapes all expenses paid. It is said that the Fresno crop is already contracted for by eastern parties at 212 to 274

Secretary WM. M. Bramhalli, of the California Dried Fruit Association, announces the appointment of J. K. Arosby & Co., of Chicago, as agents for the Association in the county lying between the Alleghany mountains on the east and the Rocky mountains on the west.

This brings into effective co-operation the largest selling or distributing house of Cafifornia Fruit Products in the United States; not only removing a possible competitor, but securing their vast organization of sub-agents in every wholesale city within their territory, as well as the well-known activity, energy and intelligence of that house. As a result of this appointment, telegraphic demands have been received from the firm for a large line of dried Fruits, Raisins and Nuts of every description produced in California.

THE CALIFORNIA dried fruit Association has succeeded in effecting the sale of four carloads of raisins to parties in London ne a price highly satisfactory to the sellers, Messrs. Miner & Hayes of Colton, San Bernardino county, and George W. Mead & Co, of Fresno, This is the first sale of the kind that has occurred in the history of the industry, and the officers of the association feel highly clated at the success of the association thus far. Secretary Bramhall expects in a short time hot only to drive the Malaga raisons out of the home market, but also to carry the competition into the European markets, where dealers are already commencing to realize the superior qualities of the California product.

DR. ISAMBARD OWEN, Secretary of the British Medical Association, has prepared a report on the enquiry into the connection of disease with habits of intemperance. He gives some statistics which will startle temperance people. Particulars obtained of 4,254 cases of total abstainers, habitually temperate, earcless drinkers, and decidedly intemperate show the lowest average duration of life that of the tectotaler and diseases fives aged 25 years and upward in which the habits of the person in regard to ulcohol were rendered in five classes, the highest the moderate drinker, his average being nearly eleven years longer. The habitnal drunkard averages about a year longer than the total abstainer.

WILLIAM RUEFF, cellar-master at the Gallegos winery, has resigned his position, and Mr. Raymond Nougant, a viticultural scholar from Montpelier, France, has been appointed to the position. Mr. Pohndorff, the manager is, we understand, employing quite a number of young men at this winery with very satisfactory results.

Bonfort's Circular notes that Alfred Greenbaum & Co. have leased premises at 29 and 31 River Street, Chicago, where they will carry a large and choice stock of California wines and brandies.

The Country Gentleman deprecates summer trimming of grape vines as in general a dangerous experiment. It says: There must be a sufficient amount of foliage to feed well the growing fruit. We have seen a vineyard ruined by cutting off shoots and leaves, under the mistaken view of letting in sunshine on the grapes. It is the leaves that need the sunlight, and not the fruit. It is better to give too much vine and foliage above the grapes than too little.

issued a report on the adaptation of Russian and other fruits to the extreme North ern portions of the United States In regard to the grape we quote as follows:

The grape (Vitis) is represented in Europe only by the single species vialfera, although since the advent of the phylloxera in the grap serowing recions of that conntry importations of American species have been freely made, with the hope that, by their more robust habit, they may prove better able to resist the attacks of this new enemy. This species proves obstinately unsuccessful throughout the eastern United States. A very considerable number of our improved American varieties have nex-rtheless become tainted with this strain by hybridization, and many of these seem to have derived desirable qualities from this source; although generally, if not always, with increased tendency to suffer from imidew the chief enemy of the cricitoric class in this country.

Of our American species, Vilis conditable far northward of the United States. By modern botanists this is blended with or included in reparia.

Vitis labrased - the indigenous wild grape of New England -becomes more rare as we proceed westward, occurring very rarely in western N w York and Michigan; and, it is behaved, wholly disappearing, as an indigenous growth faither west,

Litis astiralis can only be said to be indigenous south of the region under consideration; though occasionally extending sporadically into its south ru portions,

Within the past thirty or forty years, in the process of improving our native grapes by reproduction and bringing them under cultivation while there yet remain many varieties which clearly represent the original species, these species have in many cases become so blended by hybridization. that frequently nothing short of an authentic history of a variety would suffice to assign it its correct specific position.

As the result of this blending and improvement, the resultant varieties have come to be planted indiscriminately throughout the region under consideration; reference being mainly had to their probable ability to mature their fruit within the season, and resort being had to protection in winter in regions in which very low temperatures are to be anticipated,

Vinis vulpina (retundifolia), which includes the Scoppernong, also carolicans, cinerca, monticola, Acreo Mexicana, and rupestris, are Southern species, generally lacking hardiness at the North; few if any of them having produced varieties of value for Northern planting. The fact that Catawba and Isabella grapes, perfectly ripened in the open air at Excelsion, Minn., on the banks of Lake Minnetonks, were awarded a premium at the New Orleans Exposition, was a surprise to very many , since the former especially is not, with ordinary surroundings, considered sure to ripen fully north of Latitude 39° or 10°,

That these varieties can be fully matured in the open air five or six degrees farther north, would indicate that the summers there are specially favorable for the purpose. A visit this year to the vineyard which supplied the specimens in question showed that it is favorably situated on dry, warm soil, sloping rapidly to the cast and south, and that the cultivation and pruning were of the best and most effective kind, rendering the laying down and covering of

easy and effective. Under only ordinary trial circumstances, however, many varieties in the markets of Manneapolis and Saint Paul as early as the 18th of August,

That there is little difference between has region and those farther east so far as choice of varieties may be concerned, is clearly indicated by the following list, the residive popularity of each variety being indicated by the numbers attached to each and the varieties being those regenimended and recommended as perfectly safe for use in the discussions of societies and the red in wines. ports of committees

Concord, 33; Moore, 27; Worlen, 27; Delaware, 12; Pocklington, 12; Martha, 12. Jan. sville, 12. Agawam, 9. Lady, 9. Cottage, S., Brighton, 7; Sabar, 6; Tells graph, 6°, Elvina, 6°; Nagara, 5°, Ives, 5° Dracut Amber, 5. Loly Washington, 5. Umpure Stat. 4., Wilder, 3., Woodruff Red, 3 ; Coc, 2 | Early Victor, 2 ; Perkins, 2 : Vergennes, 2 : Eamelan, 4 ; Burry, 1 the northern Frost Grap -is under nous | Massascit, 1; Lindby, 1. Champion, 1. Jossica, 1: Horence, 1, Hutford 1. Crevelling, 1. New Haven, 1: Wyoming Red, 1., Northern Museadine, 1., Clinton, 1. Marion, 1. Bacchus, 1. Black Howk, 1. Black Eagle, 1. Bouty, 1. Red Tox. 1. El Dotado, 1. Jefferson, 1. Duchess. 1. Ion., 1. Repr. No. 33, 1,

The impolicy of the very common practree among the originators and introducers of new yare ties of sending them out under numbers is strikingly manifest in the almost universal custom in the Northwest, in the discus ions and roports of horticultural gatherings, to contour the use of the onernal numbers, sometimes coupled with the name, but quite frequently without such accompaniment, not only greatly to the inconvenience of the hearer or the reader of a report, but also with a greatly-increased hability to err consequent upon the use of

It would, be youd doubt, inure greatly to the convenience of all concerned, if all so cicties could be induced, in cases in which names exist, to resolutely exclude the numbers from their discussions, and especially from the reports of their transactions,

IMPORTANT TO WINE MAKERS.

The following letter addressed to us by Messis, Charles Memicke & Co. of this city. explains itself and as its contents seem to be of special interest to our Unbforbia wine makers and wine merchants, we cheerfully call their attention to its importance,

We beg be rewith to submit to you the following extract from Mr. A. Chevallier-Appert's list letter, which may prove interesting and useful to the wine makers and wine merchants of California, He says about. Oleotanium for white and red wines. I recommend carnestly that it be sprinkled on the grapes when they are go ing into the cousler or press, in order that it may pass, in the must, through the fernontation, controlling and regulating it. and that it may show its bencheint effect upon the young wine. This is for European wines and lest method of using it. The Obotanium can however also be used on fermented wines, young and old, as wanted, For the clarification afterwards of white and rid wines you can safely recommend my Pulverme as superior to any chamier with brandy. "Theorem good, makes persuaded, its reputation is firmly established in ple sick, etc." Referris never come until all wine making countries, and I am confi-

THE DEPARTMENT of agriculture has just the plants, which is undispensable here of recognize its great events after the first most reference go under. Eather will do,

were in an advanced stage of ripeness, and the netice of the wine intrest of Califors market the zerot will suit r with it. There "Minne tonka grapes" were freely oftened may we beginn will kindly insert the above will under bloody be a great reaction this "Munictorika grapes" were freely offered ma, we beg you will knolly insert the above in the next issue of your valuable perional season as a gods the planting of vincand of ming to our advirisements

Yours, very respectfully, Challes Meispeal & Co.

T' S. In conclusion we be a too tab. that Clevelinis Appears Obstantion and I alverms have been analysed by I refer set [15]. Rising of the State I inversity, Perkeley,

WHOLESALE MARKEL.

quartiens can are firlings but to the wool-

Halves, garriers a 1 Fig. 6 - 25, 50 and 75. From Fig. 2.

London Laters, chore

Famos part of the Laure, per box ... Los Musor Se, Creb mas L .4 marks, per li or sultanas, milde e hear or

Som tirnel termine, Steinberg sha, Anstonion, sks, Sun 1

Sugar Quotations

California Sugar Rafinery pure dist dated October Sth Cheb A Pat Cube, See, Circle A Crushed, S. Jo., Pine Conshed, S. Je Extra Powdered, S. Dry Granulated. Se Confectioners' Circle A, 7 c. Extra C. 7% of Golden C. beger Star Dugs Syrup. in bbbs, 20e: hf do, 22%,c. 5-gab kegs 27%, e. 1 gall tins, 37%, e per gall in,

Price list of the American Sagar R timery dated October 8th Extra Pine Cube, in bbls, S 4c. CircleA, Crushed, S . Crushed, S. se. Powdered, S. e. Lytra Fine Powdered, Siger Dry. Granulated, Sc. XX Dry Granulated, Ser Confectioners' Cirele A, S. ser Extra C, 67 ser Golden C, 6 ser American Golden Syrup, in Ibbls, 20c per eallon.

In The San Trancis o Market, Table Grapes are in light supply and very firm at an advance in prices. Wine Griques are in fair demand, We quote Wine Grapes, *13 00% *1* 71 ton for Zinfand 1 and *10 00 or \$15 00 for other kinds: Table Grapes, 35(9 60c pt hox for Black, 60(9 75c for Cornrelians. Blockbe for Sweetwater, Stor The for Tokays and 50% 70% for Muscot

A GROWL PROVETHE LAST

Lintrop Meromani.

In my opinion times are not near bad non-h ter the average California vinyardist. The fellows who consider onvariety of ccapes as good as another have rumed the trade in California wines, and it will not recover until they have all gone out of loisiness, or pulled their vines, or grafted over to better varieties. In my extensive travels I always make it now bestness to enquire into the prospects of Califorma wine, but the answer which is invariably given meas, " We will not keep to in forma wines until they beam how to beak. them. Too much alcohol, saithy tisk and too avid," is the general complaint. Same people are driven to them, and as times for

as long is he gets out of the way, for while Wishing to bring this communication to there is so much poor stuff thrown on the yards, and there were to plonty of buttings and rooted vines to go or ound, and this is as it should be. Then hope mes and olives ir, what they wid probably run on, and an exer production of these is not easily possi-Griques hit to ship a resistor Listern markets with solb mere isol many times over, I say ... advisedly, for I can t find . Conforming upon that is fit to eat, for is no are nearly up , and in my opinion tess will be sold in Chicago next season than this, unless a way is found to allow them to rip it more satisfactority,

With regards Lam truly yours, W. WEILSER

Charles S pt 20, 1888.

THE PARIS EXPOSITION

Figure Mercays: The undersigned has been thy bounded special Agent if the Diputtional Amendment to collect vitical to d and Citras Lybdats for the Paris Exposition 1889, and I desire the cooperation and aid of your people who are interested in forwarding the interests of Cairfornia in 1 spect to the somebustries,

It is desired on the part of the Departno ht to scenn, a f w samples of all approved varieties of 21 ques and citrus frints in cultivation in the State, also all products mony toto preferred for the market such as raisins, rons, wine, brainly, etc., also photographs of vincyards and graves, showing methods of cultivation, training, gathering fault, also views of wine harses and cellars showing also the different steps in making the wine or preparing the fruits or their product for market. Also all photographs of all tools, machines for use in such work specially new mountains, etc. Samples of finits or wine or models of tools or machinery should be carefully labelled and packed and marked "Department of Agriculture," Washington, D. C. "Paris Exposition" in corner, t Communications addressed to me at 21 Park Place. N w York, will recive prompt at-

approved by me. I am, V by Respectfully, B. P. Craynes, Sp. cial Agent. . Vita ulture and Citrus fruits.) 24 Park Place, N.A.

tention. All expense for labor and packing

will be paid by the Department or vouchers

Tax Vitientural Commissioners have recory of from the United States Department of Agricultur, a eabinet which shows per forthy the posts which atthet the vines in California and the East. The collection will be fried and placed in the new rooms in Partt's Hall - Exceptionally flue specimens of the promospera, anthrocose and many other dis assis are in the collec-

The article in the list issue of the Men. next, entitled Pasteurization of Wines. was created by mostak, to Mr. Bising, Mr. E. W. Hilgard, Professor of Agriculture at the Stat. University, was the author, and to him an apology is due for this error

Larrest Saws from the wine-making districts aumot be t runol as favorable as it might be. The low percenting of sugar gives much trouble in ferm utation. This dent that your California wine makers will the average vigneron become worse, he is especially the case with the Zinfandel.

SEEDLESS SULTANA RAISINS

A Great many vineyardists have planted the seedless Sultana grape of late years in the hope of being able to compete with the imported raisins of that variety says the Southern California. While some have turned out a very creditable article, equal in most respects to those from abroad, still the result as a whole has not been nearly so satisfactory as the experience of those who have devoted their attention to the raisins made from Muscats. The Sultana grape is a thrifty grower in many localities and bears large crops of fine-looking and fine-flavored fruit, but there seems to be a great ignorance as to the means to be adopted for converting it into merchant able raisins. As all know who have investi gated the subject, the imported Sultana is of a light amber color and is almost trans parent, while much of the California product is dark, has the natural bloom of the fruit still on it, and while equal, perhaps, in flavor so the foreign raisins, will not sell for more than half as much as the latter, simply because of the difference in appearance.

This difference is the result simply of the treatment of the Sultana grape before it is dried. The peculiarity of the imported Sultana raisins and the difference which characterizes its treatment, as compared with the ordinary Muscatel, is that the frnit, after being picked, is treated to a bath of water, olive oil and potash. More or less secrecy is obtained about the exact proportions of these ingredients which are most advisable to be used, and from inunity it seems that there is considerable difference of opinion upon the subject. In fact those in California who have adopted the method are so loath to give specific directions upon the subject that the South-ERN CALIFORNIAN is unable at present to say more than that a very small proportion of oil and potash to a large quantity of water should be used. These who are using the process have arrived at what they consider to be the best results solely by experiment and consequently feel a little backward about making public the exact method fellowed. But with the knowledge that it is by dipping the grapes quickly into such a bath the amber, translucent appearance so much desired is to be obtained, it ought not to require much experiment by any intelligent man to hit upon the proportion of the ingredients which is best adapted.

CALIFORNIA WINE IN FRANCE.

Mr. Paul Masson, connected with the celebrated wine house of Chas, Lefranc in San Jose has recently returned from a tour of several months in France. While there observes the Santa Clara Valley, he has paid strict attention to their wines and methods. tastes and critizisms, and in the light of a California experience of several years, he was able to derive great benefit from them, The season previous Mr. Lafranc shipped several thousand gallons of wine and brandy to France by wster around the Horn, being on the voyage some six months or more, and Mr. Masson was able to taste this identical wine and brandy and observe the effect of the long sea journey, as well as compare it directly with the native wines of France. He observed that the wine when shipped from here was very high colored, had lost something like 60 per cent of its what he can use as cook fruit for table use,

color, having assumed a sort of orange tint greatly admired in France, and it had improved greatly in flavor and maturity. Mr. Masson informs us that the criticism upon our California wine is that it has too decided and pronounced a bouquet and flavor to be in exact accordance with the French taste. Compared with their best wines he says the strength of this perfume in California wines is very striking. By taking about two-thirds of a neutral wine of France and combining with it one-third of the highly perfumed California wine, the product is something very desirable, and suited to the French taste. He says the French people are surprised at the strong development of these perfumed qualities in California wine. He thinks our common wines are greatly superior to the common wines of France, and are adapted to improve them greatly by blending. The loss of color during the long voyage detracts somewhat from its value as a blending wine, but the rapid maturity compensates in other good qualities. France imports great quantities of wine from Italy and Turkey, but it is the general opinion that the California wines are better than these importations,

The same criticism is made upon our brandy. It has too strong a perfume for the French taste. The flavor is good, the brandy is pure and of the best quality, but the flavor is not a Cognoc flavor and for that market must be destroyed and a true Cognac flavor imparted. The warm sur and the unexhausted soil of California produce such an amount of bonquet as the French nostril is not accustomed to, and this must be diluted and toned down to meet their views.

Mr. Masson also visited Agen, the great prune district of France. The fruit seems to be identical with that raised in California, but all the prunes are there dried by artificial heat, for the sun cannot be depended on for that purpose. The peasants and those having only a small quantity dry them in the brick baking ovens used in that country, while larger producers and prune makers on a larger scale use specially constructed dryers. Mr. Masson thinks the French prune does not lose so much weight in drying as does the California prune, although the latter seems to be more highly developed in sugar.

Mr. Masson says one may learn much about wine and other matters in France, but still a Californian can at the same time see where their methods may be improved. Tank cars are used there to transport wine on the railroads. They are made of iron, and coated inside with enamel, after the manner of our porcelain or granite ware for domestic use. Many of the points elicited in this interview are new and must be of great value to our wine men here.

FANATICISM RUN MAD.

The Hudson Sun, an Iowa paper, contains the following: Judge Ney has instructed the Grand Jury to indict all persons known to maunfacture eider for their own use or to be used in their families at home, and to indict those who manufacture wine of grapes grown in their own vineyards for home consumption and to indict any person who is known to give another person a drink of cider or wine that he has made from his own orchard or vineyard. This is Prohibition in the strict sense of the word. It remains now for those who have a surbut when he examined it there he found it plus of apples and grapes, over and above

or eat raw or sell, to ship them to snother state and have his cider and wine mannfactured and ship it back to lows and drink it himself. By so doing it gives some money to the railroads for transportation and pay to cider and wine presses of other States, or let the surplus fruit rot in the field. We believe in doing everything nice and neat but too over much nicety is not at all times best for Iowa yeomanry. Under the present laws we think the fruit growing will to some extent be discouraged.

THE VINEYARDS OF FRANCE.

The prize of \$60,000, remarks the New York Times, offered some years ago by the French government to any one who should invent a remedy for that destructive disease

of the vine, phylloxera, has not yet been awarded, although experiments with some of the remedies proposed have yielded encouraging results. The losses caused by this disease are enormous. About one-balf of the vineyards of France have been totally destroyed by it. Mr. Roosevelt, our consul at Bordeaux, reports that the loss caused directly by the destruction of vines is thus far \$1,440,000,000, to which should be added more than \$760,000,000 expended for wine and dried grapes imported to make good the shortage, raising the total loss \$2,-000,000,000. The value of wine imported 000,000,000. The value of wine imported into France to be "doctored" in various ways for use at home and sale abroad as the product of French vineyards, has risen from \$1,670,348 in 1875 to \$109,000,000 in 1887.

NATIVE WINE OUR SHIPMENTS BYSEA.

PER P. M. S. S. CO'S STEAMER ACAPULCO, OCT. 1, 1888.

TO NEW YORK.

MARKS.	Suiffers.	PACKAGES AND CONTENTS.	GALLONS	VALUE
J P	Trapoli, Berges & Co	1 barrel Brandy	48	887
D 11 - 1	"	50 barrels Wine	2,133	681
r in diamond	A Netter	4 la puncheons Wine	1 1	
D.N. M.		71 harrels Wine	5,147	1.286
P N M	C Carpy & Co	37 barrels Wine	1,850	690
		1 half-barrel Brandy	27	GO
1 D	ii ii	5 barrels Wine.	250	200
J R	1 1	12 barrels Wine	600	300
K. P. & Co.		412 barrels Brandy	104	200
11 10 00,,,,,	Lachman & Jacobi	6 half puncheons Wine		
**		Darreis wine	752	465
t 18	All at the American	2 barrels Brandy	99	220
T in diamond	Berlin & Lysori	1 barrels Wine	204	102
Plik Co	Komer & van Bergen .	5 half barrels Brandy		200
T M	B Dreytus & Co	20 barrels Wine	2,440	1,252
T M	Treser & Co	2 Dariel Wine	100	45
C II S		3 harrels Winc	152	61
A&C		6 barrels Wine	304	122
A V Co	11 (1 1 11) 6 (1)	15 barrels Wine	759	227
K to k	Fall as Problem	30 barrels Wine	1,382	829
M in diamond	Konier & Fronting	22 barrels Wine	1,105	895
arm diamond	S Laenman & Co	3 barrels Brandy)	1 1	
1+	14	21/2 barrels Brandy	1	
A in diamond	I Chan the de to On	10 kegs Wine	30	575
G	o Gundaen & Co,	5 barrels wine.	472	200
B & C		5 barrels Wine	248	165
V in duamond	**	45 barrels Wine	2,233	1,474
S M V	III D Taulas Is	20 puncheons Wine	3,373	2,692
	in rayior or	II case wille		5
Tatal amount of Wine	1 case and	******** ******************	202 000	211.700
Total amount of Brand	· case and	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	23,802	\$11,726 1,350
Total amount of Briting	,		1 0971	1,000

TO CENTRAL AMERICA.

W Y B, San Jose de Qunt Lachman & Jacobi I cases Wine	1	816
4 cases Brandy		28
E R, Acajutla Hellman Bros & Co 30 cases Wine		110
L C, Acajutia	240	54
P & P, La Libertail B Dreyfus & Co 2 barrels Wine	102	115
C G M & Co, Acajutla R Cabrera 3 cases Wine		42
M H C, Funtas Arenas John T Wright, 7 kegs Wine	70	52
	245	172
B W, La Libertad 5 barrels Wine 2 barrels Wine	411	25
E E T, Corinto A Greenbaum & Co 2 and 4, barrels Wine	102	5.1
J N J, Corinto Sperry & Co 2 barrels Wine	31	20
P B & Co, La Libertad L S Hass 2 barrels Whiskey	83	183
B & B, La Libertad	215	463
B B, Champerico	25	19
M B, Funtas Arcuas Wilmerding & Co 2 barrels Whiskey	80	280
11 G in square, Corinto F Mecks 40 cases Wine	5 N S	170
F I' & Co, La Libertad Cabrera, Roma & Co 1 keg Wine	15	13
C II D, La Libertad Urrela & Urioste 2 packages Wine		20
F 11, Acajutla 6 kegs Wine	60	60
II M, Acajutla		51
C L, Acajutta	60	60
	50	33
P D & Co, Acajutla		188
1 barrel Wine		66
		42
B B & Co, La Libertad Bloom, Baruch & Co 10 cases Wine	27	25
i nan-parrei wine		
Total annual of Wine 51 areas and	1.209	81,217
Total amount of Wine, 51 cases and	1,200	28
Total amount of Brandy, 4 cases and	378	1,111
Total amount of Whiskey, 2 cases and	916	1,114

TO MEXICO.

C II, Mazatlan,	L F Lastreto, 1 Barrel Wine	27 \$20

MISCELLANEOUS SHIPMENTS.

DESTINATION.	\ ESSEL.	arg.	GALLONS.	VALUE.
Vietoria	Umatilla	Steamer	766	8334
Mexico	Alejander	Schooner	557	1,651 382
Nanaimo	Newbern Empire	Steamer	58	149 20
Tahiti	. Tropic Bird	Barkentine	1,198	539
Total			5,105	\$1,581

Total	1 8,10	81,07
Total shipments by Panama steamers	26,038 gallons 5,105	\$12,963 1,581
Grand totals	31,143	\$14,544

OLIVE RANCH OF 448 ACRES,

Or 240 acres in one place and 208 in the other. Sold together or apart, having II,000 olives planted, and commence to bear in 1887. Fully equipped with buildtons of hay and plenty of grain; tine stream of water. Title perfect. Situated in Santa-Barbara county, near Los Olivos depot, Will sell at a bargain,

For particulars apply to

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Two hundred acres in Souoma County, ten minutes drive from railroad station. Forty acres planted in the finest variety of vines. The balance rich river bottom, and rolling land capable of the highest cultivaings, agricultural tools, horses, etc. Sixty tion. Several never failing springs and plenty of oak and redwood timber on the property. Good house, large barn, and out buildings. Scenery, climate and roads unexciled. Good fishing and hunting in the neighborhood all the year round. One f the most elegant and profitable suburban homes in Northern California.

Imquire of "W. H.," office of the San CAL. Prancisco Mers hant.

INCORPORATIO ISSE

460 ACRES

TREES AND PLANTS.

CALIFORNIA NURSERY CO.,

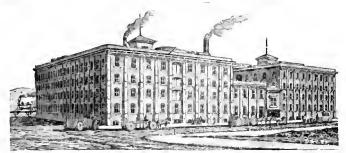
NILES, ALAMEDA COUNTY, CAL.

LARGEST STOCK ON THE PACIFIC COAST

Fruit Trees, Olives, Oranges and Lemons, Nut Trees, Wine and Table Grapes, Berry Plants, Shade Trees, Evergreens, Shrubs, Roses, Etc., Etc., Etc.

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JOHN ROCK, Manager, CALIFORNIA NURSERY CO. - -Niles, Alameda County, Cal.



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Wines Stored and Loans Negotiated on Pure Sound Wines Only.

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$oldsymbol{L}, oldsymbol{G}, oldsymbol{SRESOVICH} oldsymbol{\$} = oldsymbol{CO}_{**},$

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IN CREEN AND DRIED FRUITS, NUTS, Etc.

DESICCATED COCOANUT, Manufacturing every day. Ask your Grover for Pioneer brand. It is the best and cheapest in the world. Modals awarded in all Fairs where exhibited.

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OF SAN FRANCISCO, CAL.

			CAPITAL.	ASSETS.
TART'ARY	1,	1875	\$ 300,000	8 717,188 15
ANUARY	1,	1880	. 750,000	1,160,017 00
ANUARY	1,	1555	1,000,000	2,181,925-18

Losses Paid in Twenty-five Years, \$7,500,000 00.

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WM. J. DUTTON, Sects tary, B. FAYMONVILLE, Asst. Secretary.

CHALLENGE

Double Acting Wine Force Pump



Fump, of great compactives and rower, by use in non-cellura for nanaping from one tank into another. The Cylinders of our Iron Fumps are brass lined, the pistor rod, valves, and valve seats are eriss. Our all Leass Fumps are no de coursely of brass, with the ress. Our all brass Funnes are mode entirely of brass, with the coeption of the 'ever, and at an extra charge we will furnish them so with all metallic valves

also with all metallic valves. The water ways are large and very direct, and the whole pump is so simple that there is no hability to get out of order, and so substantial as to be very conducing. This Pump is extensively used by Wim Men. Being compact it is easily removed from place to place. The arrangement of the lever makes it less laborious to wirk than the ordinary lever. We re-amount the Jump 8 wime deals read the most service-sible Pump for their requirements, and gearantee them equal in every respect to any Pump for this purpose in the market.

EACH PIMP IS GLABANTELD.

We carry a full but of Wine, Erroves' Gorden and Steam Hose It sizes and qualities. Wine Cooks of all descriptions. Wine of all sizes and qualities. Wene Cooks in and Fermenting Panks. Send for prices.

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JOHNSON-LOCKE MERCANTILE COMPANY,

COMMISSION MERCHANTS, SAN FRANCISCO.

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We will offer a full line of other Grecers' articles shortly.

PERMENTING WINES

AN ADDRESS BY H. A. PELLETT.

To make dry wine, grapes should be neither under nor overripe, 22 to 24 per cent, saccharine, by Balling's sugar scate, will give the best results. Under 20 per cent, the wine will pe green or thin, while above 21 per cent, the fermentation will be difficult and the product heavy, alcoholie and deficient in the aroma and bouquet characteristic of dry wines.

We should aim to produce a light, wholesome and refreshing wine—a wine that used with reason, will act as a gentle stimulant and tonic, and take the place of the flery and brutalizing abominations which, by their too common use and indulgence, have been and still are the cause of untold misery, degredation and crime.

RED WINE

Tanks for the fermentation of red wine should not be more than four feet deep; the diameter is immaterial, and may be of any size best adapted to the capacity of the fermenting room. In large wineries I find tanks ten feet in diameter most convenient, on account of the working space afforded to remove the pomace after fermentation.*

The tanks being ready to receive their charge, the crusher is regulated so as to simply crack the berries, allowing the stems and seeds to run through without bruising or breaking. Close crushing should be avoided, as the breaking of stems and cracking of seeds is liable to impure a harsh and disagreeable taste to the vine through fermentation. The tanks should not contain more than thirty inches of mash; twenty-four inches would be preferably and sufer, and not so liable to overheating. I am a great advocate of shallow tanks, a shallow amount of crushed grapes to the tauk. Overheating in the primary cause of defective fermentation; to prevent it frequent stirring unust be resorted to, and in some cases, when the ferminisation is not kept down by that process, pumping overthat is, drawing the fermenting wine from the bottom of the tank and pumping it over the floating pamace—thus partially cooling and airing it, will stimulate and revive the ferment germs and materially assist fermentation.

Should this treatment fail (and it will fail occasionally) when the fermenting mass is too great, or rather too deep, you might have a tank twenty feet in diameter; if the mass is not more than thirty inches in depth, it will not then overheat. It is the great depth of the grapes that produce the heat; the carbonic acid gas cannot escape fast enough and produces too much heat. That is the cause of all our trouble. There remains but one alternative, and that is to draw off the imperfectly fermented wine into an empty tank, press the pomace, add the press wine to the former and while yet hot, crush fresh grapes into it, in amount equal if possible to the amount of "stuck" or imperfectly fermented wine, A small quantity will not do. You must remember that wine in that condition is sometimes 90 degrees and over of temperature.

Suppose you have a thousand gallous of imperfectly fermented wine in a large tank, that is the product of about seven tons of grapes. On the top of that I would crush again six or seven tons of grapes. There I have only one-half the amount of pomace in proportion to the amount of juice, and as pomace is the very thing that produces great heat, because the gas cannot easily

place and continue to a successful termina- out, there is gas, and the fermentation not extra strong carbolic soap, made a pretty tion within three or four days.

Three times a day record of the temperature of each tank should be taken; also, a record of the progress of fermentation. This can easily be done with Balling's succharometer, which combines both instruments.

Grapes should no be crushed when hot, nor should the temperature of the fermenting room ne at any time above 80 degrees Fahrenheit Hot grapes crushed in a hot room, will almost invariably fail to ferment through by reason of everheating.

Wine, failing of a complete fermentation at the first operation, and refermented a second time, either by the addition of fresh grapes, or by any other method, will never possess the keeping qualities, nor the fineness obtained by a first and thorough fermentation,

As soon as the fermentation is over, the wine will have all the color and contain all the tannin that the grapes can produce. It will, therefore, be well to draw off at once and send the pomace to the press, no unit ter whether the wine be hot or not.

Some wine makers allow the wine and pomace to remain in the tanks until it is perfectly cold, with the expectation of obtaining more color and tannin. This is a great mistake, and the practice is responsible for much of the inferior, rank, and in some cases, diseased wine to be found in the producers cellars,

Stemming is opposed by some, while others practice it. The latter contend that the stems (provided they are not too green) impart durability to the wine. This question I will leave to others to argue. This much, however, I will say, that a better and more thorough fermentation can be obtained without stemming.

FERMENTATION OF WHITE WINE.

The grapes being crushed in a tank (the depth and diameter of which is immaterial), the mash is allowed to remain intact until the first indication of fermentation appears, when the must is drawn off into an open tank, the pomace pressed without delay, and the must expressed from the pomace added to it. There you have the first juice from the crushing and that also produced by the press. If the temperature of the must is low, the fermentation will be slow at the start; if, on the other hand, the temperature is high, active fermentation will immediately follow, a thick senm will soon farm and float on the surface of the must; this scum, composed partly of light impurities and of partially speut ferment, of a brownish color, should be carefully removed by skimming, repeating the operation at intervals until the scum changes its color to a white froth, when further skimming is nunecessary.

When the fermentation is half through, that is, when the sugar scale indicates from 10 to 12 degrees, the must is transferred into puncheous of the ordinary size, say one hundred and sixty gallons, filling up to within six inches of the bnng; in three or four days the fermentation will be completed.

As soon as the fermentation is over, which is readily ascertained by the saccharometer, or even by the taste of the skillful vinter, the casks should be filled, and either a sand bag or some other contrivance placed over the bunghole, to prevent impurieties and accept of air to the wine,

You can ascertain very easily when your wine is through by striking a match and placing it over the cask. If it is through, the tobacco, pyrithenm and other liquids, escape, the new fermentation will take the match will burn; if it puts the match I went to the drug store and bought some awards in the state.

completed.

One week later, there being no fermentation, nor carbonic acid gets evolved, the easks are again filled and bunged. This process of partial fermentation in open tanks, I claim, offers the following advau-

First -The blending of the must from the crusher and the press, the press wine being indispensable to the former, containing as it does, the necessary amount of tannin, and other flavoring properties, which constitute fine, sound and durable wine,

Second-The removal of the lighter impurities by skimming, and of the heavier by settling, before the wine is transferred to the storage easts, thereby insuring parity, and speedy settling and clearing of the

Third-Uniformity of the temperature and of the stage of fermentation, when transferred from the tank, as well as uniformity of the quality of the wine, and the certainty of its thorough and complete fermentation within a short period of its transference from the tank.

TETTIGONIA VITES,

The above is as near as I can get at it. the name of the jusect spoken of by M Sagar, says D. S. Marvin in the Vineyardists of July 1st, as increasing so rapidly in the vineyards of the lake region, under the name of "thrip." First named by Harris in 1831, and alluded to by our State Entomologist in his report for 1885, as not having been well studied, and supposed to belong to the genns Eyrthraneura and not Thripidae. You published an article from me last season upon this topic and another commenting upon the same by the State Entomologist. In addition to what was then said I desire to add that I have been carefully studying these insects the present season, and it gives me great pleasure to add that I have been able to mainly control them, so that if I am to take the seasons experience as it now stands, I uo louger fear the insects, or the several insects suspected by the Entomologist, but as to this point, I desire to add that I appear to have but one insect to contend with here. To be sure there appears, upon a cursory examination with the glass, to be a number of insects of different sizes and colors, but they seem to me to be only different stages and degrees of development of the same one. As the season advances they leave the surface of the soil and line and bred upon the foilage of the vines. Previous to the present season I had confined my efforts in subduing them to syringing the vines with tobacco and various other solutions, after the insects had become so abundant as to seriously injure the vines. The failure of this treatment was obvious, for the jusects were jucreasing year by year, so much as to threaten the extermination of all the thin leaved species of the vine, and especially young vines just starting. Upon seeing and realizing that all my efforts had resulted in failure, I resolved to give more attention to both observation and experiment. I found that these insects began to hatch or appear much earlier then I had supposed, and that they were mainly confined to the lowest points in the vineyard early in the spring, away from the wind and where there was the most heat and shelter of dead air. Herein I conceived was my opportunity, and as I had failed with

strong solution, got out my Woodasan spray bellows and went for them early in the morning, while the sun was but an hour or two above the horizon and the insects above the base of the vines, not yet thawed out enough to get away from the spray, so that I could wet down whole colonies of them in a short space of time. There was some pretty lively jumping and scattering as I would spray the ground and the base of the vines. I kept at it for some three or four weeks, every other day, in May, or until the insects became so scarce that I could not see any more of them. I spent perhaps an hour each morning. The result of it all is that at this date, July 15, when I desire to find a few of the insects for study under the glass, so as to be sure of my facts for writing this paper, I had difficult in procuring enough insects for study. At the same time the weather has been very airy and hot, exactly the couditions favoring their breeding and multiplication. Towards the last, my carbotic soup being pretty much used up, I added enough London purple to color the water, apparently with equally good results, but I observe that the leaves of the vines were more affected. "One swallow," I coucede, "does not make spring," but if, upon repetiton next season, the same results follow I shall teel that I have practiced a method that will destroy the worst insect enemy of the vine in New York, and given our vineyardists a smiling instead of a gloomy countenance.

It will seem that it is too late in the season now to do much, since the insects have spread upon the foilage of the whole vineyards and are found mostly upon the under side of the leaves, nuless the fruit is sacrificed to save the vines in the lowest and worst affected localities, for my experience has been that poisons so injure the fruit as to make it dangerous and unpresentable. Packard gives a cut of another insect much like this, but not ours, The life history of the genus does not seem to have been studied. I give the result of my studies and experiments now more to prepare for and encourage this kind of exploiting and onslaught apou the enemy next spring, when the conditions will be favorable to successful work now, and encourage faith and hope in the operations of the vinevard.

Well, no, thank you gentlemen; I have a very good watch now, but, if you insist, I might hint that I am a pretty lame old soldier, and that I might possible stand it to be caused by those who are herein bene

LOS GATOS WINERIES.

The Sau Francisco Herald of Trade says that the vineyards of Los Gatos rank among the best in the state. There is an extra deposit of tannic acid and coloring matter in the skins which make the grapes raised have especially adapted to the making of the claret of the Bordeanx type, There are two wineries, both doing an excellent business. The Los Gatos and Saratoga winery, situated about midway between the two towns, has now a capacity of 1,000 tons and has been making considerable enlargements for the vintage, including a bleuding-tank to hold 15,000 gallons. It is carrying over a stock of 1886 and 1887 wines for the purpose of ageing. The company, which is limited to a few of the largest vineyardists in the neighborhood, only treats its own produce, and its wines have received some of the higest

A MAMMOTH WINERY

The Anaheim Gastle of this week gives an interesting description of a visit to the great Dreyfus winery. The following are extracts: The main bonbling is 200586 feet and is massively built. Two large grape elevators receive the product of the vine by wagoulouds. After being weighed the wagons are driven to the elevators and rigidly unloaded. The grapes are conveyed to steam crushers on the third story, were they are subjected to the steaming and reducing process. The elevators work upon pulleys, being an endless succession of receptacle which convey their freight to the crushers and return to the wagons, to be boaded again. The capacity of the wmery is 120 tons of grapes per day. As there are in one ton of grapes nearly 150 gallons of must, it will be seen that the winery is capublic of reducing grapes to the extent of 18,000 gallons per day. Twelve hundred tens of grapes have thus far been crushed this season.

On the first floor, the first thought to strike one is that some of the large wine casks with which the building is stored have sustained a serious leak and that the precious joice of the grape is escaping in streams sufficient to form a well sized in regating district. Visitors are at once assured that the noisy torrents are nothing less then the juice of the granes descending in streams from the crushers into mammoth wine easks upon the second floor, Wending the way to the third story, grapes were seen rising in continuous chyators. Here they go through their first process upon their way to become part of the product of the State.

The winery contains at present over 600, 000 gallons, and it is possible that before the end of the season this amount will be doubled. Grapes are purchased from many vineyards in the northern end of the county, and in a few days grapes will be shipped here from Los Angeles. The winery has a side track from the Southern Pacific, where all consignments are placed, when they are at once conveyed to the elevators. The wines manufactured here have a world wide reputation, and grace the tables of famous connoisseurs. Mr. Weglein is an expert vigneron and superintends the wine making in person. The winery and its contents are valued in the neighborhood of \$100,000, it gives employment to a large number of people, and is truly one of the establishments of which our people are justly proud.

With regard to the blight prevailing as mong vineyards in this portion of the State, Mr. Weglein is of the opinion that it is caused by climate influences, is purely tonporary and will die out in short order, when vineyards will again resume their favored place. With regard to the statement made by a certain microscopist that he had discovered animalcula feeding upon the heart of the vine, both Mr. Weglein and Mr. Krebs pronounce the same erroneous, The following gentlemen has subjected discused vines to the minutest examination during the past three years, as have undoubtedly many of our vineyardist. No wormy pest has been discovered and no traces left of its rayages. The experiment of the State Viticulturist, to inaugurate an experimental plat of graps vines in this seetion, and will undoubtedly result in scientitic observation which will certainly rebound to the welfare of all. The thought is prevalent, however, that a solution of the dathcult will soon be forthcoming, and that the perione alone can give, while the vines of paper west of the Rocky Mountains.

grape blight will result, withal in being land America, practically, are hardly entitled dred to climatic influences which ravage yet to a golden wedding. Nevertheless, fruit and creals the world over.

California has not yet discovered the secret of the French in regard to blending grand wines. This is only from a connois sour's point of view, and probably not one in a hundred wine drinkers are able to distinguish between the quarties of the two products. Moreover, the wines produced in European countries, and which to a limited extent attain to the name of grand wines, are consumed principally by the crowned heads through out the old world These families have impuestionably acquired a tiste for their favorite grids of of the vine classed, is some have done wines, which are undoubtedly of rare execttence, and this cannot be cradicated so long as their tayonte vintages are at hand, however, it is the opinion of many winemakers that our wines will one day outrank all others

Clearge Rice, Commissioner for the Los Angeles District, acting for L. J. Rose, 10ports as follows Notwithstanding the tendency throughout Southern California. to subdivide large tracts into smaller ones and some large ones into lots. I find that the vine interest has not been neglected The planting of cuttings last senson has been about 47 per cent of all plants I lost before. The planting has been of the choicest varieties that experience has shown to be the last. Better arrangements for mak ing grapes into wines and brandy have been made and more attention even to details. The grape and wine growers are alive to the subject, and many expect to continue to make wine and make it most profitable. The prospect for this year is exceedingly good with every assurance of a full crop.

WINES AND BRANDIES.

In retponding to the teast, "Wines and Brandies" at the banquet recently given the visiting delegates to the National Protective Convention at Delmonicos, New York, Mr. Charles R nauld is reported in Hontort's as follows.

"Without expatiating, as is customary on such occasions, I believe, on the state of my personal feelings, or endeavoring to explain how unexpectedly. I am called upon to address you I wish to thank you for this opportunity of making a few dry remarks wet be the subsect.

I know it is very wrong to tell stories, and I desire to add that I was so taught during my childhood, for I would not have you think that I have learned the fact from experience. But the invitation of our worthy chairman forcibly reminds me of a story. Let me tell it to you briefly.

A boy was required to write a composition on "The difference between the ammals of America and Europe," Although he scratched his head, he was not embarrassed - boys in ver ne until they have passed for y and he acquitted lanself of his task by penning the following concise patriotic essay: "The animals of America are generally smaller than European and mals but but they get the reall the same.

Now, gentlemen, it strikes me that this would be a very appropriate epathonemia for what I might say on the subject of "Wines and Brandies bere and in Unrope."

Between these productions of the two continents there are two main differences.

First, the wines and branches of Europe come from vines that have been mused for centuries with a consuminate skill that ex-

we see the American vine lending youthful. vigor and hardiness, to its refin d but enfeebled sisters of Europe, and enabling them to withstand the dually attacks of phylloxera. It is not presumptions, theretere, on the part of the American grower to thank that, with care and time, hes products. will, in the words of the boy, set there all the same

After this islunssion of an importer 1 better in every way if American products and considering the practically unfinited already, to borrow foreign num s, and if (xeuse the sample they sailed and i their) says local probletion of wine, and again own rolors. To give a dig of take the the improdubility that a substitute could word in the sins of divotion, and furthfulnessia bad num may rain dan but to give him a good one is not in cosmily the making of him.

Second, the wines of Europe are made in countries where wine is drank, while we all know that in America our paople, is a class, do not drink wine. More is the puty, for wine is certainly a drink more wholesome than ice water. It is the best preventive of abuse in the consumption of alcoholte beverages, emphemistically called, by those who prefer the dark side of the door " stine lands, " And my friend Col. Leoser, who is a great statistician, could prove to you that the country of all which has the greatest per capita consumption of winshows of all the least draukementss. And here, gentlemen, our American wine grower has a mission to fulfill, a mission worthy of the name, regardless of any tariff advan | but since the Chinese have secured exclutage, for home consumption will be worth to him one hundred protections to place sound wines within the reach of the people, the laboring classes -man, woman and child and to teach them that it is not wrong, but good and right to use what was given us by Providence, and to use it not inconcealment, but openly, with the courage pay. of their opinion, thus avoiding at least one sin-hypocrisy

ious. Where, then, is common sense? In ious—Where, then, is common sense?—In have fostered thin so labor are finding out abstinence?—No; but in moderation which that the little yellow man will not always in all things is the rule of will-conducted

Why, gentlemen, we are all temperates men, we of the wine and spirit trade as well as our friends on the other side of the However, the result of the strike in the house. But we do not, perhaps, agree on the scope of the word temperature. With some it appears to only abstinence from alcolledic beverages; while with others, including "Webster's Unabridged, "it signifies "moderation in the indulgence of appetit's and passions, 2. This broader sense should I think, be needpted by all those who spurn fanaticism and prejudice, who claim for themselves no right they are not ready to grant others, and who, in short, are fairminded and sineere. Ah! gentlemen, sincenty and liberal mindedness, there are the two infant industries that need protecting, Let them be fosticd, and all will be with honest men. And when we all think less oftener of our rights and others' duries, and more offs ner of our duties and of ois' rights then, perhaps even our good friends of the blue ribbion will see, as we do, that there is some foundation for the saying of the aneients, they were not tectotalers, in con-

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CAUCASIAN MINE.

The following information respecting the trade in Concession wine is extracted from a recent report by the British Area-Consul at Butonine of Concast in wine, though a prodoor known in Trans-Cancasta since the times of Neah, and very extensively produe d and consumed by the native population, has only during the last few years hecome an enticle of export. The quantity shapped in 1887 to foreign countries was trust, gentlemen, that I am entitled to an small, thout become g dones. Much larger quantities are yearly with to Bussia proper ages aldenoting exceptionable capa Julius of this country idmitting the cultivition of the vine, the netrick very extencivily be found for that produce, one can not but admit that there are some fair chances for the Cancasian wine to become amore important article of export in the buture; and, in ismuch, as it affects the interests of the bulk of the native population, it may, in the course of time, prove a more y duable and listing resource of wealth to this country than the new all-engrossing Baku petroleum trade. The present price of native wine varies, according to the quality of the produce from 1s, to 2s, per gallon." _ _ _

CHINESE GRAPE-PICKERS

The Fresno vin yardists are having a great deal of trouble with their Chinese grape-pickers this year, says the Traver Advocate. A few seasons ago this class of labor could be secured at almost any price, sive control of this branch of industry they have become arrogant and self-important, and this nothwithstanding the fact that they are receiving \$1.25 to \$1.50 a day a largor increase on former wages, a white foreman is put over them, if a Chinese for man arges them, to work, faster, if they do not think they are getting enough They give no cause for striking but quit work and a vineyard without a word of xplanation, leaving thousands of dollars Enough is beneficial, to much is major worth or grapes of the grape growers and manufacture is who remain a serf, but that, when the becomes master of the situation, as he is at the present time in this industry, he will crack his whip over the head of his former master and make him dance to a marry time vineyards among the Chinese this year will be their displacement to make room for young Americans from the country towns and cities of California, adding to our progress by encouraging industry and keeping at home the thousands of dollars which the Chinese grape pickers have been send-ing annually to their native country.

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Registration for the General Election.

All electors desiring to vote at the General Election to be held Novemb r 6, 1888, must be registered regardless of any previous registration.

R gistration for the General Election to R gistration for the water in the base held November 6, 1888, will commence at the Office of the Register of Voters, in the basement of the New City Hall, on WEDNESDAY, Angust 8, 1888, and will continue until MONDAY. October 15, 1888, inclusive, Office to 5 o'clock P.M. Office hours from 9 o'clock A.M.

The registration of voters in the precincts will be held from October 16th to 20th in-clusive. By order of the Board of Election Commissioners. BEN. A. PRINDLE, Commissioners. August 4, 1888,

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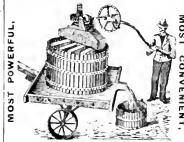
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VOL. XXI. NO 3.

SAN FRANCISCO, OCTOBER 26, 1888.

PRICE 15 CENTS

THE OLIVE.

PROGRESS OF THE INDUSTRY IN CALIFORNIA AND ARIZONA.

An Interesting Report on the tul tivation of this Valuable Tree by the 1 S Commissioner of Agriculture.

The olive and Europea', with the date and other semi-tropical fruits, was early introduced into California by the mission fathers. It is found to-day as a remnant from the Old Mission garden, but owing to neglect the trees are generally not doing well in these places, particularly on account of the presence of a species of black-scale Secanium olea), which appears to be a us. tive of the State. The first attempt at making olive culture a matter of real interest does not date back much further than 1872. The person with whose name olive culture is justly associated is Mr. Elwood Cooperof Santa Barbara. In February, 1872, he set out his first trees. In 1876 he produced his first oil. His plantation now consists of about 50 acres. The plantation is located about a mile from the sea, 12 miles north of Santa Barbara, the climate being very mild, and during the summer subject to heavy fogs from the ocean.

When reaching a certain age the trees have alternate years of heavy and light crops Mr. Cooper has tried the expertment of planting out trees on successive years, hoping there by to have a part of his plantation heavily laden each harvest The experiment was not a success. For a year or two some difference in the bearing will exist, but after a while the one condition, light or heavy yield, would be general.

A partial remedy for this habit might be had in a suitable system of prinning, but Mr. Cooper has not found profitable any system he has tried.

Several other large plantations have been set out in Santa Barbara County, one in Santa Inez Valley being especially prom-

In San Diego County the Kimball Brothers, of National City, were among the first to plant the olive on the mess lands near the bay of San Diego. The rain fall there being very scant, some arrigation has been The olive ripens there in Octo ber and November, and the yield is early

30 gallons.

Mr. F A. Kimball built last season a press, and a fair quality of oil was made, which has been marketed this year.

In the El Cajon Valley Mr. Levi Chase has a very fine orchard, bearing well.

About the thriving settlement of Pomona, in Los Angeles County, a number of olive trees have been planted. The Rev. Mr Loop has a number of large trees, which at the age of ten years averaged 35 gallons in the moist parts of these counties. In planted several acres of olives. They commenced bearing at about five years old, and son. increased rapidly. In Pomona are also some of the largest trees in the State, some of them being nearly 2 feet in diameter near the ground. Mr. White has a number of varieties on trial, but so far the Mission and Picholine are the only ones tried. Of the Mission variety there are here evidently at eight years 50 pounds of olives, at ten two kinds, according to Mr. Loop, one myening very much earlier than the other, the arst meening being small and the late meening large. At San Fernandino Mission, in San Fernandino Valley, the old trees. nearly seventy his years old, were cut back and are now fully rejuvenated and bearing heavy crops. Angeles County there are trees planted in many places. The largest orchard is that opposite side of the valley, the olive has irrigation. We have seen on the grounds, character, a black adobe in many instances of Mr. H Bliss young trees seven years old loaded with fruit, producing probably 150 pounds of olives.

Some trees have been planted in Fresh (ored learn, the trees are irrigated.

ord as Laving borns, the exact yield of the yield of 1,000 trees which had not been W diskill, and many of the man

is no reason why they should not succeed 21 tons of olives, part of which was some trees at six years yielding as high as there, unless from the water rising too near; made into pekles and part into a lin the surface, cansed by too copions irrigation.

In Stockton, San Joaquin County, the olive bears well, although the heavy adobe land in the immediate vicinity can not be considered adapted tous best development

Cruz countries have all proved more or less. adapted to the growth of the clive with the exception of the effects of the black scale Mr. White, of the same place, the interior part of the first-named country large orchards are being planted this sea-

In Berkeley, Alameda County, at the University, there are growing two trees planted in 1872. At first they were totally neglected, remaining in consequence but barely alive for the first two years; but when cultivated grew rapidly and produced years their yield was lost pounds each; at two lve years the yold was 225 pounds each, the crop of alternate years being quite small. Still the location must not be regarded as an altogether favorable one.

Mission sa Jose, At the old mission grounds, in Santa Chira County, now the In other portions of Los property of Mr. Juan Gaileges., a number of old large trees are growing, planted about one hundred years ago by the mission of Mr. C. J. Hopkins at Pasadona. They fathers. According to Mr. Gallegos these consist of Picholine and Misssion, and the trees were perfectly free from black-scale trees are five to six years old. At San Bers until about nine years ago, when he thinks nardino we find clive trees bearing in the it was introduced with some orange trees gardens of the town. At Riverside, at the Before the advent of the scale the trees did exerchingly well. By severe measures, gr wn to large size, but the complaint is cutting back, etc., Mr. Gallegos has manin ele that the trees are not so produce. The paged to bring them back to productiveness cause is an loubtedly too much or too fittle. The soil is mostly of a decide by heavy

In many portions of the county young ours are being planted. Irrigation is not being that of Mr. Gerre, H. q. r. mean prienced.

In Santa Clara County exists the largest county but they are yet too young to give a colive orchard in the central portion of the record. The only trees which have come. State, on the Quito ranch, 5 miles from Les under our elservation are grown on the Gates. The adest trees on the place are Freshe Vineyar) Company's property, east twenty years old, but the majority of the of town. The trees looked bright and trees, some 3,000, are only leven years sid. healthy, were in their fifth year, and have half of which were transplanted, being too set some fruit. The soil here is a reducals close together. The trees were topped back Severely and have all dene well, and in two their age in the State Livy were protected by Mr. Ch. E. About Tulare City olive trees are on receive are commenced hearing some. In 1884 two

and good; young trees bearing a few gal- which I have been unable to learn. There removed ir pruned severely an intel to 1887 the yield was very light, and 1886. This season it from sea to be 2 not, but not as good as wis expected list spring. The soil where the ordinal stands is a gravelly loam and the land beed, no irrigation for young trees has been practice b. San Luis Obispo, Monterey, and Santa Olives are found in various portions of the valley doing well without irrigation.

NORTHERN INTELLUE

At Saint Helena we have som several trees of the Mission variety arowing on the farm of Mr. Llow- line. The dilectores were planted teny are act, and begin bear ing five years after, alternately light and heavy crops are ivel no irright to and are about 15 forthigh and similar in ham-

At Oak Kn dl, the property of D, Mollone 5 miles from Napa City, we have so in specimens of olives bearing for some years.

A most interesting experiment from this so tion deserves especial mention. In November 1884, Mr. A. Flamant, f Napa, set out in the hills west of the town several thousand rested cuttings of the Picholine variety. Holes dout a fact hep were day, and in many instances the litte trees were planted on the rocky soil, and earth enough to cover the roots had to be taken from elsewhere. During the summer having was done sufficient to prevent baking of the ground, but no irrigation was practiced In the most exposed places ir bailey 10 [] cent, died, but were replaced next year. In the summer of 1887 most of the trees were in good condition, and having reached a height of 6 feet during three so soons growth. Certainly a very an our aging showing, considering the pacity of the soil

The clive has sure a led were in the county of Sonomain an analy real hifferent locations, the diest and best kitt rehard (Gen Ellen, who this year Stand I the prize for the lest on exhibited at the M changes' Fair in San Francis

From Lake County our material drawing conclusions as to the object trity of the coave is right is suit, but it it is a state of or record some concess, in its firer In Salator Candy, near Winters of Latel Creek, exist ird d y the largest trees for

6 feet in circumference. The trees have borne heavily every other year for several years past, though for some reason the crop the last two years has been light. In Pleasant and Vaca valleys there are young olive trees in different places, all doing well. In Yole County, at Woodland, the olive is met with, but yet too young to judge its yield. In the city of Sacramento the clive bears well, but is more healthy on the plains near Florin, where Mr. S. Lea has a paying grove.

About Marysville, in Yuba County, the olive does well and bears abundantly on the sediment lands, as well as in the adjoining county of Sutter. Butte County has many large trees. Mr. George Wollet has some trees twenty-three years old which are 30 feet high and fully 15 inches through at the base. From eight of these trees, two years ago, were made 64 pint bottles of oil, hesides giving 2,000 pounds of berries for pickles. At Chico, Gen. Bidwell has several large trees equally as fine, planted eighteen years. They have been bearing heavily at least every other year since the sixth year from setting. Colusa County, as well as Tehama, has young olive trees

FOOT-HILL REGION.

The following is an extract from the writer's report to the State Board of Horticul-

Placer County, Penryn.—The oldest tree about Penryn is a tree growing on Orange Hill, the property of W R. Strong & Co. The tree was planted six years ago, then probably five years old, but very small, and although grown without care, having rebeived no water (except from seepage from neighboring trees which have been irrigated), is a robust healthy looking tree about 15 feet high, with a crown diameter of about 10 feet, and 8 inches through at the trunk The tree has borne for a number of years, and last season produced somewhere near 150 pounds. This season it is bearing considerably, Scattered through the orchard are a number of olive trees of various sizes. The soil is a redcolored so-called rotten granite (syenite) These trees are irrigated, with the rest of the orchard, and some few are in bearing, having been planted about five years.

P. W. Butler has a large number of olives, both of Picholine and broad-leaved Mission, planted along avenues running through the place, which, like all the country, consists of rolling hills, with a similar soil to that mentioned above. The trees vere planted five years ago, then small trees, and have received liberal irrigation. They are about 12 to 15 feet high, and commenced bearing last year. The Picholines are full of fruit this year, which was ripe some time ago, much having dropped off; the Missions are not fully ripe now (middle of December). The fruit has not been utilized before this senson

Newcastle,-Mr. Charles Gould, below town, has three fine olive tress about ten years old, which have been bearing for a number of years. The trees are 8 inches through at the base, with large crowns, The trees (Mission variety) were loaded last season, but the crop is very light this year, though the fruit is of large size. In the town of Newcastle is found an olive tree here and there. Dr. Frey has a tree in his yard doing well, with the exception of the fruit being infested with the Diaspinous scale referred to before. The soil is similar to that about Penryn,

Auburn.-In this neighborhood are sev-

eral good-sized olive orchards, the oldest of these being that of Mr. L. A. Gould, some 3 miles from town. The majority of the trees are the so-called Picholine, which evidently here are five weeks earlier than the Mission. The oldest trees are about seven years, and are bearing quite full, one tree producing 70 pounds; their average height is about 12 feet; the habit very dense. Some oil was made from the Picholine this year, but is not clarified yet.

Beside the Mission varieties and these Mr. Gould has, are two other varieties of olives, one considerably smaller than the ordinary broad-leaved Mission, but of the same shape. Also a variety obtained from Mr. Kock, of San Jose, called Oblonga, of a peculiar almond-like shape. Although a very small tree, it is loaded with fruit, ripening a couple of weeks before the Mission olive here.

Irrigation has been practiced to some extent by Mr. Gould. The soil is of slaty formation, and the trees seem to thrive equally well on shallowest as on deepest soil. No signs at present of the black scale.

Mr. F. Closs, a mile or two from Anburn. has quite an orchard chiefly of Picholine the soil is similar to that of Mr. Gould's and the trees are doing well.

Dr. Agard: About 25 acres in all have been set out in olives by this gentleman of both Mission and Pieholine. The oldest trees were planted two years ago (rooted trees), and are about 5 feet high, are branched low, with only about 1 toot of trunk. In spite of the little irrigation these trees have received (10 gallons apiece during the first summer, 15 gallons this summer), the growth has been uniformly good, Dr. Agard reports, however, a much greater loss of Mission trees than of Picholines.

El Dorado.-The climate and soil of this county being very similar to Placer, we have no doubt that a great deal of land of the county is well adapted to the olive. We have learned of one gentleman undertaking the culture with success without irrigation, but have not been able to ascertain anything definite about it. About Coloma there are several trees scattered which have commenced to hear,

There is now growing in this State a large number of varieties of olives, imported by enterprising citizens, nurserymen, and others. France, Spain, and Italy are rep resented in these varieties, of which so few have yet fruited that correct opinions cannot at present be formed on any but two.

THE MISSION OLIVE.

There seems to be really several kinds. Some claim to distinguish six varieties as belonging to the family of oval-shaped olives, of which the Cornicabra in Spain is the type, though M. Tablada, the wellknown authority on olives, contends that the exact counterpart of the Mission olive is not to be found in Spain, and it is therefore likely that it was originally raised from seed brought by the fathers from Mexico. The same authority pronounced our Mission olive a superior one for oil. The Cornicabra class is considered a hardy but late ripening family of olives. Its latter character here is somewhat of an objection in the cooler coast climate. For this reason experiments with the early-ripening varieties, as the Nevadillo Blanco, are of great interest. A well-grown Mission olive weighs one-sixth of an ounce, is of an oval shape, and when fully ripe is of a purplish-black color. The pit is of a comparatively small size. Well-made oil from this variety is of

is the fact that at the World's Exposition in New Orleans Mr. Elwood Cooper's Mis sion olive oil was awarded the first pre-

The Picholine,—The late B. B. Redding, Esq, a far sighted gentleman of means, and one who had the greatest faith in olive culture, imported directly from France a number of varieties of olives, which were planted on his ranch near Sacramento. Of these, it appears that all but the Picholine died. Unlike the Mission, this variety readily propagates from cuttings, and thus soon became generally distributed. Whether or not Mr. Reading was aware of the character of this olive we do not know, but after his death it was propagated supposing it to be a large pickling variety similar to the Spanish Queen, but when the tree first fruited it proved to be a small oval olive weighing about one-sixteenth of an ounce. Whether this is the true Picholine we are not qualified to decide, since no adequate description is at hand. Its chief merits with us are, compact, vigorous, and hardy growth, ripening six weeks earlier in a cool climate than the Mission. Its small size is somewhat compensated for by the ease with which it may be stripped from the branches.

PROPAGATION

In this State it has generally been done by cuttings and layers. As regards the Mission olive, the surest results are obtained from layers, though in Southern California the preferred way has been by large cuttings, as described below:

The common and preferred method is to plant the cuttings taken from the trees of sound wood from three-quarters of an inch to an inch and a half in diameter, and from 14 to 16 inches long. These enttings should be taken from the tree during the months of December and January, neatly trimmed without bruising, and carefully trenched in loose sandy soil; a shady place is preferred. They should be planted in permanent sites from February 20 to March 20, depending upon the season. The ground should be well prepared, and sufficiently dry so that there is no mud, and the weather should be warm. In Santa Barbara, near the coast, no irrigation is necessary; but very frequent stirring of the top soil with a hoe or iron take for a considerable distance around the cuttings is necessary during the spring and summer. About three-fourths of all that are well planted will grow. My plan is to set them 20 feet apart each way, and place them in the ground butt end down at an angle of about forty-five degrees, the top to the north, and barely cover. Mark the place with a stake. By planting them obliquely the bottom end will be from 10 inches to a foot below the surface.

This mode of propagation, especially in a changeable climate, is liable to several objections. One is that the large cuttings often remain dormant for several years, thus eausing an uneven stand. By first rooting the cuttings in nursery rows this of course is avoided, but never will so fine a root system and one almost equal to that from seedling plants be developed, as by starting the trees from small herbaceous ent-

For at least the cooler parts of the State we do not hesitate in recommending this method: Take from young growing trees the top when neither very soft nor perfectly hard, having three to four sets of leaves, and cut with a sharp knife to lower joint.

course of three or four months the little enttings will have rooted, and should then be potted in small pots, where they should remain until well rooted. In a few months more they will be found ready to set out, When very warm weather prevails a thin mulching around the little tree may be advisable, but when a moderate temperature prevails a few waterings in a month will be all that is necessary, and even this only in unfavorable springs. It should be added that nothing is gained by setting ont the trees before the soil is warm, as they will not grow. The trees referred to previously as planted in Santa Cruz Mountain were propagated in this manner, and have received no irrigation since setting out. Trees raised from such small cuttings resemble closely young seedlings, and form a beautiful root system.

To get enttings from large truncheons. such as are imported from Spain and other countries, proceed in the following manner: Cut the truncheons in pieces about 18 inches long, split those pieces in two, put the halves so made in the ground horizontally with the bark side up, covering with soil 4 to 5 inches deep. Let such bed he in a warm well-drained place, kept moderately moist. In a few months a large number of young shoots will break through the ground. When of a suitable size and hardness, as before described, take the cuttings and treat in the manner previously mentioned

The raising of olives from seeds has not been practiced to any extent in this State, principally because the Mission, the chief one, has a very small proportion of good kernels. The Picholine, so easily pronggated from small cuttings, affords a convenient grafting stock. New varieties havs been budded in the ordinary way on the Picholine by our enterprising nurserymen, but it is evident from the number of failures, lately learned from Mr. White, of Pomona, that he has successfully grafted the Picholine on Mission stock by means of eommon eleft grafting, using quite small grafts. The work was performed in April, ont of doors, without any special care other than that used by grafting other trees. We refer to this because we know of no other instance where outdoor grafts have succeeded. Grafting on young roots under glass has been practiced by nurserymen to some extent.

GENERAL CONCLUSIONS.

We have seen that the olive flourishes over a large area of the State, and perhaps it may be safe to say that no other fruit-tree is destined to be cultivated throughout such a great extent of this country. Innumerable hills and mountain-slopes skirting our coast valleys, too dry to support any other tree without irrigation, have in the olive a tree especially suited to them. The climate of these hills is nearly always warm, the frosts come late and disappear early in the spring their nature being such as to provide the drainage that is one of the essential conditions for the healthy growth of the olive.

In other regions, in the richer valleys either of the warmer or cooler sections of the State, there is no doubt that, suitable kinds being selected for each, all varieties may here find a home. Here as elsewhere the usual questions of soil, climate, diseases, and insect enemies must be considered, the last named not being least, particularly the Lecanium olea, before mentioned. seemingly a native of the State. This scals superior quality; indeed, one proof of this Put in a little frame with sand. In the drawback in all places near the sea coast,

and will thrive even as far as 50 miles from it. As a general thing it becomes scarcer as we leave the coast, but not until we enter the dry climate of the interior valleys can it be defied altogether. Thus we find hardly a trace of it in parts of San Bernar . dino County and on the foot-hills of Placer County, where the olive dourishes and bears remarkably well.

If this immunity from the black-scale, which in California has proved to be one of the greatest drawbacks to olive enlure, is not counterbalanced by other evils, such as drying winds blowing at the time of blooming, it would seem plain that the olive grower might better leave entirely the coast regions and its influences, I expressed ic similar doubt on the question a few years. ago in an article recently republished and I believe now, that there are regions less subject to the north winds, and which probably. will prove better suited to the growth of the olive than any other portion, we refer to the foot-hills of the St rra Nevada Mountains at an elevation from a few hundred to two thousand feet. It seems, however, that even there we cannot escape the attacks of all kinds of insects; for to my surprise I found a species of diaspinous scale infesting leaves and fruit of the olive at Newcastle, Placer County This scale proved to be. Aspidiotus nevii, the alexader scale, which infests the latter tree in the driest part of the State. This pest, how ever, could be easily guarded against.

ABIZONA

As in all other fruits, Arizona has still but comparatively short experience to record in olive culture.

At Yuma depot, there are several olivetrees growing which show signs of fruit this year. These trees are quite old, perhaps. twelve years, having been transplanted from the barrack grounds three or four vents ago.

Near Phoenix, Salt River Valley, the olive has only been planted two years; but the tree there, as everywhere else in Auzona, is bright and clean.

At Florence, 60 miles from Phoenix, at the gardens of Colonel Ruggles, the olive is reported as baying fruited well for two ser-

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The Southern Californian Informat gives the following from the United States Land Laws.

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PRESEMPTIONS

Section 176 says that every person being the head of a family, widow or single person over the age of twenty one and a citizen of the United States, or having filed a declaration of intention to become such, make final proof and secure a patent as required by the naturalization laws, who has made or bereafter makes a settlement in person on the public lands subject to preemption, and who inhabits and improves the same, and who has creeted a dwelling try and final proof; nor is he or she to thereon, is authorized to enter with the Registrar of the United States Land Office for the district in which the land lies, by legal subdivision, any number of acres not exceeding 160 acres, or a quarter section of land, to include the residence of the claimant, upon paying the United States mini-

mum price for such land. No person, who is the proprietor of 320 acros, can preempt land. No person who quits or abundons his own land to reside on public land in the same State or Territory, can pre-empt. Persons can, however, take homesteads and timber claims whether they have 320 acres or not, neither does the law prohibit his taking a homestead when he has left a residence on his own land. The above only refers to pre-emp-

The first requirement in taking a preemption is to take the quarter section desired, and ascertain from the Land Office record that it is vacant and subject to entry. He must then make some improvements - not stick up stakes, but make some substantial improvements, and then, within ninety days, file a declaratory statement for the band on the local band office, the fees for which are \$3. A residence must be established on the land when the intprovements, are first begun, and a continuous residence is obligatory

After a continuous residence upon a premption for six months, settlement can be proven and the Gozernment price paid, there will be a final receipt issued to the pre-emptor; but, in case either does not desire to make final proof at the end of six months, he has thirty-three months from the time he made settlement.

HOMESTEAD

Entries must be made in person, usually before the Register of the local land office, and the entry fees are \$16. The requirements of the homestead laws are about the same as those of the pre-emption, except that residence can be established within six months after making filing; but homesteads are subject to contest if settlers fail to get on the land inside of six months after entry. Homesteads may be proved up in six mouths and paid out on the same as preemptions, but can be proved up in five years without paying. In making final proof the settler will be required to give the number of times he or she has been absent from the claim; where went, and for what they went, and are questioned regarding the amount of improvements they have. If, in the judgment of the Register and Receiver the law has not been complied with, they will not issue a final receipt,

HIMBER CLAIMS

Do not require a residence. Timber claims must be entered by personal application, sworn to within the land district where the land is situated, before officer having a scal and authorized to administer oath. Claimant must have five acres broken the first year, the second year must have five acres broken and cultivate the first breaking; the third year must put trees, seeds or cuttings in the first five acres and cultivate the secand five, the fourth year must set out the second five nervs in trees, tree-seed or tree cuttings. If in eight years there are 6750 growing trees on the tract, claimant can Government fees in timber culture claims are \$11 for entry and \$10 for final proof.

All duties required by the timber culture laws may be done by others, except the enquired to reside near the land, but will always be expected to comply with the law in regard to improvements.

There is no fixed amount of improvments required in homestood or pre-emption law. Besidence and cultivation in good faith as a home, a farm to the claim. come to be extended,

aut's best ability, is held to be the requirement of the law,

SOLDIERS! HOMESTEADS.

Soldiers who served in the United States army for ninety days and were honorably discharged and have lived loval to the Govcriment, can file declaratory statements on 160 acres of vacant land, by an agent through the power of attorney, in a form prescribed by law. This power can be xeented before a notary public anywhere in the United States, and sent to some reliable agent, who will select the quarter section of land and file on it for the soldier. This filing will absolutely hold the land for six months without the residence of the claimant. At the end of six months the solder must begin a residence and make another filing, called the final entry, at which time he pays a fee, the same as in homestead cases, Soldiers are compelled to live at least one year on their claim, but they can deduct their service, as a soldier from the five years required by the common homestead, and thus get their patent in a sheater time than he who has not served his country as a soldier. Soldiers' widows are entitled to the use of the deceased husband's service while in the war to assist her in proving up a claim, and if the widow is dead, then one of the minor heirs can use the right- but it must be done through the guardian of the child. We lows and orphans of soldiers will not be required to cultivate the land, or to personally do the work, but can cause the same to be done by others capable of practical farming. Good faith and cultivation to the best of the ability of the claimant is all that the law requires.

The above will show those in the East who do not understand the law governing the public domains that it is impossible for them to acquire land in this country without becoming a resident, and with the exception of soldiers' claims, the applicant must appear in person and know something of the land he desires.

DESERT LAND.

Desert land may be entered only in the States of California and Oregon and the Territories of Washington, Idaho, Montana, Utah, Wyoming, Arizona, New Mexico and Dakota. Any person wishing to make entry of desert lands must file with the officers of the land office for the district wherein the land is situated, a declaration setting forth that he intends to reclaim a tract of desert land not exceeding one section, by conducting water upon it; giving amount of land, that without irrigation it will not produce an agricultural crop; that there is no timber growing on the land. that it contains no valuable mineral, stone or saline deposits.

This declaration may be executed before the clerk of any court of record having a seal. If the applicant is not a citizen, but has declared his intention to become such, a duly certified copy of his declaration of intention to become a citizen must be presented and filed.

The declaration must also contain a deseription of the land applied for, by legal subdivisions if surveyed, or, if unsurveyed, as nearly as possible without a survey, by giving, with as much charness and precision as possible, the locality of the tract with reference to known and conspicuous landmarks or the established lines of suryey, so as to admit of its being thereafter readily identified when the lines of curvey most scriously, and in some cases are en-

As proliminary to the filing of such docharation, it must be satisfactorily shown that the land, therein described is desert band as defined in the second section of the act, To this end the testimony of at Teast two disinterested and credible witnesses is required.

After this proof has been much, the applicant will pay the Receiver the sum of twenty-five cents per acre for the land applied for, and receive a certificate

At any time within three years after the date of filing the declaration and the issue of certificate provided the United States surveys, have been extended over the land, the proper party may make satisfactory proof of having conducted water upon the land applied for. This proof must consist of the testimony of at least two disinterested and credible witnesses, who must appear in person before the Register and Receiver. They must declare that they have personal knowledge of the condition of the land applied for, and of the facts to which they testify; and their testimony must be reduced to writinc in the usual manner.

When satisfactory proof has been made, the applicant will make an additional payment of \$1 per acre, when a patent will be issued.

The right to the use of the water by the persons conducting the same on or to any tract of d sert land not to exceed six hundred and forty acres, shall depend upon bons fide prior appropriation; and such right shall not exceed the amount of water actually appropriated and necessarily used for the purpose of irrigation and reclamation; and all surplus water over and above such actual appropriation and use, together with the water of all lakes, rivers and other sources of water supply upon the public lands, and not navigible, must remain and he held free for the appropriation and use of the public for irrigation, mining and manufacturing purposes, subject to existing rights.

EFFECT OF SPRAYING.

Last year, says the El Dorado Republican, "two of our horticulturists tried the experiment of fruit spraying with most satisfactory result. L. M. Davis sprayed 500 or 600 Bartlett pear trees with a solution of one pound of Paris green in 160 gallons of water. He found that this solution killed the near slug and produced no visible effect upon the fruit foliage, and, although he only sprayed the trees once, he found it very beneficial to the fruit, Spraying with this solution costs about three mills to the tree besides the labor and expense for a pump. Earl Norton and his sister, Mrs. Delamy, sprayed last year about 2,000 pear and apple trees using a solution of Paris green, one pound to 100 gallons of water, Although they only sprayed the trees once, yet the results were very satisfactory. An apple oreliard that was sprayed yielded 150 boxes, and the year b fore, without spraying, only 23

The San Diego Suc says. It is estimated that over one-half of the vines of the Mission variety in San Gabriel valley have died this year. The committee investigating the cause, by the aid of a powerful glass, has discovered a fungus growth which is believed to be the cause of the destruction of the vines. Those vineyards which have been urigited frequently are affected

THE OLIVE-

Some Interesting Facts Concerning This Valuable Tree

Within certain latitudes, says the Analyst, the olives will grow anywhere and serve for almost any purpose. On a dry and stony elevation that would starve out a thistle this plant luxuriates; and if the sea breezes may but fan the young shoots, so much more of promise is there for the olive harvest. Propagated chiefly by cutting, the "willowy" looking twigs take root with a proud defiance of ordinary rules; and there is a whimsically planted grove of olive trees of unusual size and beauty near the town of Messa, in Morocco, which illustrates this trait in a remarkable way. One of the dynasty of Seddia, being on a military expedition, encamped here with his army The pegs with which the cavalry picketed their horses were cut from olives in the neighborhood; and some sudden cause of alarm leading to the abandonment of the position, the pegs were left in the ground, and, making the best of the situation, developed into the handsomest group of olives in the district. Olives are mentioned in the earliest records of Egypt, and their introduction into Greece took place at least as

early as 1,500 years before our era. Thence their cultivation naturally passed into Italy, the Romans especially prizing them; while Virgil mentions three distinct varieties, each of which had its own fastidious supporters in the ancient conflict of tasters. Pliny also tells us that they also grew in the heart of Spain and France though he awards the palm to the smaller olive of Syria, the olive which was at least more delicate than that produced in the western countries. So far as regards the oil of Spain, and to some extent that of Italy, this judgment stands good to the present hour, for the reason that the Spanish olive is a larger and coarser fruit, while the Italian growers are too apt to detract from the limpid delicacy of the virgin oil by the sacrifice of quality to quantity. For the olive, like all generous givers, demands that you should "squeeze" him gently. The oil is expressed from the entire pulp and body of the fruit, and its quality stands in inverse perpertion the quantity produced The first pressure yields a thin, pure liquid, almost colorless; and with this even the most fastidious of English palates rarely makes acquaintance. As the presaure is increased a less delicate product is the result; while if it is still further prolonged a rank and unwholesome residum is obtained, wholly unfit for edible purposes. It should be mentioned that virgin oil does not maintain its freshness for more than a few weeks without the adddition of a little salt or sugar, and it is impossible for any one to realize the exquisite delicacy of this first expression of the freshly gathered olive, unless he has sojourned in such a district as that of which Aviguou is the

The oil of Aramout, in Provence, was formerly supposed to have no equal in Europe. Both the olive and the manufactured oil of southeast of France are, indeed, still unrivalled by those of any other country. The Italians pay more respect to the commercial aspect of their production, and among them the number of olive farmers and merchants is very large. They have a proverb; "If you wish to leave a compentency to your grandchildren, plant an olive. " Doubtless the advice is sound enough, for the trees often flourish for more than a century,

and bear heavy crops to the last But to the pasant of South France the olive is almost what the pig is to the English laborer Prudent housewives there, are as averse to the introduction of a new fruit at table as there thrifty Euglish sisters are to the"new' loaf. In fact, they habitually preserve the darker berries for everyday use; for thesenot being so agreeable to the taste, "go ' so much further-a neccessary consideration when they often form the staple than the accompainment of the meal. Olives intended for eating are gathered while still green, usually in the month of September

PICKLING IN SPAIN, The development of the fruit is closely watched as the ripeniug period approaches. When the berries have reached their full size, while still hard and green they are gathered. Ordinarily they are knocked off by striking the limbs with sticks; this is apt to bruise the limbs and injure the fruit so growers of reputation have their fruit picked off by haud. Two processes are employed in picking. After sorting the olives to uniform size, the old style of "slow picking " is to put the fruit into fresh water, changing the water once a day for fourteen days. The water when first drawn will be intensely bitter, gradually growing less so, until it becomes sweet, when the olives will be fit for the brine. After each of the several drawings, fresh water must be added quickly as any long exposure is apt to turn the olives rancid or sour. When ready for the brine the fruit is put into a solution of one part of clean salt-in California it will be safest to use Liverpool salt—to fourteen parts of fresh water. The brine may be used in old casks, which have contained sound wine or brandy, but not in any package which has had any rank or sour substances. The sater plan is to use tauks or barrels made for this purpose, entirely of sound oak which has been soaked for thirty days previously in fresh water, frequently changed. The olive is sensitive to flavors and odors and repays cleanliness and watchfulness well. A barrel or tank, even partly made of redwood, or any kind of pine, spruce or fir might taint the fruit enough to ruin its sale. In transferring the olives from the soaking to the brine receptacle, they should be handled only with wooden or tin dippers, not with the hand . Human hands must be kept off from sensitive fruits of all kinds as much as possible. Before puting the olievs in a layer is made of olive twigs and leaves at the bottom to act as a buffer. Enough fruit is ladled in to cover the bottom well, then enough brine to cover the fruit. This is continued until the barrel is full, when another layer of olive twigs and leaves is put on top, and over the oak shakes or staves, the latter being kept scrupulously cleaned, and weighed down with stones A canvas or tarpaulin is then spread over the barrel and the fruit left to become thoroughly pickled. The process will take about four months, when, if it has been properly followed, the olives will be in fit condition to eat or to bottle, or will keep perfectly sound for a year or more.

The essential points to oboserve, in order to secure good results, at first, to use no ripe or even partly ripe, nor rotton or defective olives; to pick by hand and avoid bruising: to soak throughly and change water daily until it becomes sweet: to keep the olives from long exposure to the air during changes of water or at any time thereafter; so avoid handling by hand as much as pos rible, and thaough all the processes to observe the strictest cleanliness in all respects,

in all materials or substances that come in contact with the fruit. A new process, employing caustic soda before brining, works Templeton Times require to be planted from much more rapidly, but requires great expertness to save spoiling the fruit.

Italy is the greatest olive-producing conntry in the world, 1,500,000 acres being devoted to that industra, yielding 39,000,000 to 50,000,000 gallous of oil annually.

A CURE FOR SNAKE BITES

finds anything that will relieve suffering which divided ioto the number of feet in humanity, to make it known to the world? This was my feeling, says a correspondent trees to the acre. Trees on the almond of the Southern Cultivator when I read the root require to be in a deep, well-drained following cure for snake bites in an old copy of the American Farmer, dated July, 1825, their own roots; some varieties of peaches The article was credited to the Angusta (Ga.) Constitutionalist. In great cities, particularly in London, a number of per- in the above-described soil. Trees on the sons procure their livelihood by catching peach root will succeed in a greater variety vipers. They are employed by chemists, apothecaries, etc. I remember some years ago, before leaving England, to have read, in the Royal Society in London, a curious peach root. The Myro bolan plum root is circumstance of one of these viper catchers-A member of the society had heard of a man thus engaged who, when bitten, cured produce the best results, and will do well himself with olive oil. After inquiry he was found and interrogated as to the facts. He said it was true. A meeting of the society was held, attended by a number of the nobility. The viper catcher was present, together with his wife and a large viper, Laying his arm naked to the shoulder he suffered the irritated reptile to bite him. His wife permitted the poison to operate till his head, face and tongue were greately swollen, his arm and face turned black, and his senses seemed much affected. Then she applied the oil by pouring a small quanity down him and bathing the bitten part, and the man gradually soon recovered.

The circumstance strongly impressed me, and knowing that the English viper is the most venomous in that county, I determined to try the effects on the bite of a rattlesnake the first opportunity that presented. In 1866, while traveling through Pendleton district, S. C., the opportunity presented itself. While sorry for the man's misfor tune, I rejoiced in the opportunity to try the effect of plive oil. Having a vial in my pocket I hastened to him. His face and head were grately swollen, the latter black his tengue enlarged, extending out of his mouth; his eyes appeared as if they would shoot from their sockets; his senses were gone, and he really looked as though he would die, and that soon. He was bitten on the foot. I with great difficulty succeeded in getting two tablespoonsful down him. Its effect was almost instantaneous, powerful in counteracting the poison, as appeared by the strong through quick convulsion which followed. In thirty minutes it had acted both as an emetic and cathartic. after which the swelling of the head and face, etc., gradually abated. In two hours he was so far recovered as to articulate, and from that time he recovered fast till perfectly over it. The oil used internally and externally did not exceed seven spoonsfuls. For twelve years I had known the oil used without failure, it given in time. I have used it with equal success on horses, does cattle, etc., that were bitten. Oue case, I am credibly informed, has occurred, where a woman was bitten by a small dog which exhibited strong symptoms of hydrophobia, which was used with like success.

Subscribe for the MERCHANT.

PLANTING FRUIT TREES

All orchard trees in California, says the twenty to twenty-five feet apart. In order to ascertain the number of trees required to plant a given piece of land, at a given distant apart, the following rule may be followed: Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will Is it the duty of every one, when he he the number of square feet for each plant, the acre (43,50°) will give the number of and warm soil. Almonds succeed best on also. French prunes and some other varieties of plums do well on the almond root, of soils; a gravelly soil, a red hill soil, a sandy river bottom, or a moderately heavy land, will not nourish and preserve the the best for most varieties of prunes and plums, but it requires a rich, moist land to in quite a heavy soil. The apple and pear, on their own roots only require a rich deep land, and will take a good deal of moisture especially the latter The cherry requires deep, sandy loam, along the creek beds, to bring it to perfection. The Mazzard is the only stock on which to work it in California. The apricot on peach root will thrive in the same soils as the peach on pear root; on its own root it will not do so well in shallow soil. What applies to the peach, apples similarly to the nectarine. The quince will grow in very wetland. The walnut requires a very deep, rich land. The olive is said to produce the fluest quality of fruit on rocky billside, but will make a correspondingly larger tree in richer soil, and will also produce larger crops. The Myrobolan plum (Prunus Myroluna) is the best plum stock, and is generally the hest root for the French prune. I would caution planters, however, against buying trees raised upon Myrobalan stocks which have been grown from cuttings. A seedling is much the hardier and more vigorous. Neither is the Myrobolau a good stock for the apricot or peach. For small gardens, or where the soil is very wet, it may be well to use the St. Julien plum stock for peaches and

VINE MILDEW.

It is noticed by the Gardener's Chronicle that M. Coignet, in the Kyne Americaine, recommends the use of a fine powder containing copper sulphate for the viue mildew, Peronospora, as preferable to liquid solutions, which necessitate nicety of manipulation, trouble water carriage and powerful spray pumps which readily get out of order -inconveniences which do not apply to the distribution of fine powder by means of bellows. M. Coignet's powder consists of precipitated sulphate of lime, (gypsum) which is made to take up ten per cent of a solution of copper sulphate. The result is a powder infinitissimally ficely divided, in which part of the copper is reduced to a state of oxide, which acts slowly, and part remaios as sulphate, which acts quickly.

It advices its readers to try this substance in the manner indicated, on potatoes infect ed with the potatoe rot, another species of Peronospora, and we may add that the tomato should come in for a share of the

RAISIN GRAPES.

Insect Enemies and the Art of turing and Packing

Gustav Eisen, writing in the S. F. Examinor, save. The animals mamical to the raisin grape are of p riodical and compart. In well settled and cultivated districts, tively rare occurrence, except the leaf hopeper or grape fly. This is found almost no weeds are allowed to spring up, the every year, and it is, no doubt, a native of the Pacific Coast. It is a minute insect. about the size of a pinhead, but oblong, white, with minute colored spots, and it jumps as well as thes. It hibernates under wood and bark and feeds in sunny winter days on the fresh and young altiferio and the settled and cultivated places. Some other weeds. At the first development of the grape leaves in the spring, the vinehopper moves from the native plants to the leaves of the grapevines. It punctures the tender cells and feeds on the sap of the vines. If too numerous much damagmay be done. After three weeks or a month the haf-hopper crop will to found to considerably dimished. The old ones are dying out, but not before they have laid numerous eggs in the voius of the vinleaves. In August or the end of July the new vine hopper crop fiatches out. Whilgrowing, the vines fairly swarm with the small vine hoppers, which, in day time, feed on the underside of the leaves, which soon dry up, expose the berries to the sun. and either cause them to sunburn badly or only hasten their maturity. If the grapes are well advanced when the second crop comes, little damage is done, but if they are still green and hard when the blaves are injured, they are apt to sunscald severely, and the loss may be great. The remedies against the leaf hopper are as yet only experimental. Many have been proposed, but few found effective.

The best remedies are not effective alone but all combined will, if they do not eradicate the hopper, so diminish it that it is not lo be peared as a pest. After the crop of grapes is picked, sheep should be pastured in the vinevards and the surrounding roads or vacant fields. By their eating the green feed on which the hopper lives during the winter, and early spring, the latter are considerably diminished in number. As soon as the sheep have caten everything cleanvineleaves, grass an hall—the vine yard and adjacent fields should be ploughed well and cultivated, and the prunings of the vincvard by ned and, the lashes scattered over the soil.

This winter's crop of the vine Lopper is mostly destroyed. To destroy those which hatch early in the spring, or which have moved in upon the young sines from the outside fields, the following device is made use of A concay, screen of wire netting is attached to a long handle. This concavscreen should have the shape of a quarter part of a globe, and should be large enough to cover one-half of a young-haved vine By placing a similar screen on the other side of the vines and fitting the two screens close together the vito may be entirely covered. Before inclosing the vine the says. The quantity of aboth he spirits exscreen is sprayed with coal oil or crude, The vine is slightly shocked. when all the hoppers will rise at once and France has been gradually diminishing, strike the kerosene and perish. This oper- in consequence of the rayages caused by ation should be performed by two men,

The effect on the latter is to greatly reduce the color of the skin, which is so essential potatoes. to the color of the wine.

The grasshopper is also of a periodical nature, and may prove destructive in places surrounded by much vacant land, where every inch of the soti is plowed and grasshopper will never get a start, and can do no harm. Some three or four years ago many districts were greatly troubled with this post. The grasshopper bred on the plains, and especially on the vacint foothill lands, and from there gradualty invaded seventeen different species of grasshoppers were counted, all swarming together Among them, however, was not found the locust, nor any species that migrate in swarms. A remedy was soon found which, if applied in time, will destroy the grass hoppers to fore any damage has been done Ten points of arsenic is mixed with seventyfive pounds of bran and twenty five pounds of middlings and moistened with water to make a paste. Enough syrup of glucose is add d to make it sweet and keep it moist. This mixture is spread on small pieces of shakes, which are scattered all through the vineyard or orchard. A whole row of this may be laid between the vineyard and the slowly-approaching grasshopper swarm. If tences are anywhere near the mixture may be spread on the top board to the greatest advantage. The grasshoppers will eat the ais tie mixture in proference to anything else, and will soon be found dead by the millions, covering the ground everywhere. If a whole community joins to fight this post, there need be no fear of its being destructive.

THE ARMY-WORM EVIL

The army-worm is also a pest which, if not attended to in time, will prove unmanageable, and which will do much harm The army worm may consist of different species of caterpallers, which, for some unaccountable reason, in years favorable to their breeding in enormous numbers, sud- many, also greatly increased. dealy begin to travel, and invode the cultivated lands and vinvards in in the uncultivated nebls outside. There are to be seen in Canforni, two kinds of army worms -the small, grayish black, about two mehrs long, and the large one, three to four inches long, stripel, green, yellow, black and brown. Both kinds can be arrested in their march by making a treuch all around their viney and. This need only be two fort wide, and two feet doep. sides should be as steep as possible. army worms will crawl into the trench in their endeavors to reach the vines, but will not be able to crawl over the opposite steep

[I . be Confine 1]

ALCOHOL IN TRANCL.

J. L. Buthbone, U. S. Consul-General at Paris, in a recent report on this subject, (gallon, tracted by distillation from wine for a long time the only distillation consumed in real average of alcohol versure is

coous substances, especially maize and for their

The spirits produced in France are n.w. for the greater part, distilled from molisses From 1840 to 1850 the average yearly preduction amounts 1 to 1 (57 000 2 dlors now reaches 18 192,000 gallons, or nearly two-niths of the t tal pr du to n.

period between 1840 and 1850 did not excold 13,200 gallens. It now maches 13,-000,000 gallons, but, he worth biss, it now soms to be decreasing slightly, and it is replaced by the distillation of grain,

The production of alcohol extrest-1 from grain, which, befor the year 1845, did not amount to a great deal, throughout France, began to increase about that Paper I for voir, after a severe disciss had greatly reduces the yield of the patatocrops. It was stationary till the year 1876, but it is now five times greater than then, maize especially being used for distillation. In 1873, the quantity proluced was 2 208,-000 gallens, in 1884, 12,812 000 gallens, and in 1885 reaching 14 8 00,000 gallons.

The distillation of parators, mer lucid into France some sixty years now has never gained a great importance. In 1873 the production of said spirits reached 246,-(iot) gillons in 1555 it was reduced to Io3,000 gallons

The quantities of alcohol produced nafoultidly exceed the figure set firth in official statements, as, since the law passed in 1875, which released landowers and farmers from the obligation of making the declaration required from licensed distillers and exempted them from the firquent inspection of revenue efficers, there has been a greater facility to defraud the Government by making false declarations as to the quartities actually produced.

IMPORTS AND EXPORTS.

In the same time that the production of spirits in Trance gradually augmented. imports of alcohol, especially from Ger-

German alcohel, of bad quality is, to a very great extent, mixed with Spanish wines entering Trance, but which only pays the duty imposed upon wines. This alcohol is afterwards extracted from the inand sold at cheaper prices than I reach and other foreign alrehols.

IMPORT DUTY

The import duty beyond upon alcoholous tering Prance has been raised, by a law passed on the 5th of July, 1887, from 30 francs to 70 francs per hectoliter of purdeched 22 to 51 cents per gall n mer ase of the duty was emisible red as a kind of retaliatory and protestionist measnte against Germany, where a premium of 11 cents per gallon was allowed by the Government to exporters of demostic alhels as a numburs ment of the internal tax, while this tax was only 15 cents per

The statement property bly the Ministry of Timanees represents but in perfectly to does not imbrace the quantities of all shed produced by land owners and form ream rare a who have not the an ayenter who phyll to raised mildow in the vineyards of alcohol fraudalentry list? If a introduced have careful as any against wine one on each side of the vine. This remody Prance, folling from 18,148,000 gallons in justs. Frame, and I sales a large part | f | makin. They couldn't first fruit, and has not been used long, but it was first sug- 1871 to 51'0000 gallons in 1880, and to the population, especially women and find a ready narket for it in this country gested and practiced last spring, and with most the ever growing demand for sprints children, consume but a anti-quantity of is well as in the Controlled For policy. For policy no doubt, be considerably improved upon. This distillation has been replaced by decomparity. Consequently, it is to be inferred. The vine hopper is not so imprious to the raisin grapes as to the colored wine grapes. Since the colored wine grapes are to the colored wine grapes as to the colored wine grapes.

asculture f alcehol per is gifty most be eacht times greater than

They introduces more ise in the number fig. it. Inchin -h is sin France is bee nangara ar dan isinasi. Their r, who is in 1524 was 257,512, reach 130,117 in 1887. In 1873, a law The distillation of boot root jugous also was passed on a time parameter against us-very important, producing do hold for cool parameter persons for the strong in quanty. The annual proluction in the price included by a second in any other public programmed the solling har riethem.

. LITTERL OF AMERICAN GRAPE CTLIERE

Hoseman relitly read a Prof G the American Hortzeltural costy in Contained in the outlook for And riving grapes a core. He thought that in the East they near rely on the Aestivalis, Riparia, Cin. r. c. and Rup stris speers as the formula for our reliable

He had unless to if both in the allility of this contry to provide a wine good enough to stard in its own morets, and we should log ... the trikery is belong it out under French and G rman labels, which so far had been mostly done with our best prolucts, fir which France and Germany recave the er lit, who we get the blame for the inferior artial . We claim, and claim pastly, that we are marke wine, the pure , are of the graphs of shough and cheap to neh to make it accessible to every laborer and every family in the Union, while we also know that we can produce quality high one ugh toplose the conneissours, and we als can athat me. I me, we are furtherms the cause of true temperance.

The chaire lays between our own native Ir dueti n. pur randeheaperin every respect, and the majerted article at a higher prise and within assurance as to its purity. And then, again, I hepe we are getting too far beyond the marrow propulate of " farfor Loll and board ought " to stand on the simple post-xt of turning up our noses at home products, to profer Trench and Gorman brands, just because they cost three times as not he like caus of home industry and true temp rance will triumph in

When we come to look at our raisin industry, the case is still more simple. Here, we may say, we have a mon poly; from the small beginn is years ago we have worked up to the probable of a nillion twentypound I was in 1887, and the brands of California packers or new preferred to the for an projects, but becase it is American product, but against all the projudice, engendered by I he usage, for the foreign article. Now or raisits are driving the finest at fersion manufacture from cur market, and are self almost before they r ach the Bast ru market.

If we have notethed by that all this immitty have Crifting raising, be course they are the aper and better, in pre-ference to the argorited, what an immense field is of not this indistry. Here is an

ELECTRIFICATION OF WINE

Translation from the Italian of Flavio Mencation, appended to the last annual report of Chief Viticultural Officer Wheeler.

In February, 1885, at the Physical Justitute of the University of Rome I com menced experiments on the rapid growing old of wine by means of electricity. It interested me to understand more of the chemical actions of an electric current on wine in general, already noted and aunonneed in the works of Professor Blaseina (1, Caspeni (2), and others, the different effects that a current of constant intensity would have produced applied to the same sample of wine during different periods of time, and especially to know the different grades of oxydation, what would be the subordinate results of the conservability that the wine would have acquired.

The experiments were conducted in this way: In a small vat of the capacity of ten litres, or thereabouts, I immersed two plates of platina, sixty-six millimetres in length, twenty-five inches in width, and thirty-five millimetres spart, that communicated with a pile of six Bunsen batteries, large model, mounted in tension. I introduced in the same circuit a compass that was graded in amper-hour, destined to measure the current furnished.

Before commencing the experiment I preserved a part in a bottle (laboratory bottle of Eilenmeyer) closed with a cork. a sample of the liquid that was to undergo the test. It was a common white wine of the firm Ostini di Gengano, still rich with fermenting matter, and in a fair way of maturation. I caused the current to act, and measured the intensity by means of an electrometer; extracted after thirty hours a sample, which I preserved in the same manner as the other. I renewed the plases, and continued the action of the current for six hours, extracted another sample. After another six hours, a third, and so on successively, observing the current furnished and the number of hours it continued to act. Extracted fifteen other samples: the last had received the current for one hundred and thirty hours, which I preserved as the others preceding. The residue of about three and one half liters I gathered in a jar, closed with a cork, and hermetically scaled with paraffine

I removed the plates from the wine and, when the action of the current was stopped, found them to be covered with an albuminoid substance, almost black and in an advanced state of oxydation. The wine appeared musty, and had acquired a perfume, that from the samples less electrified it appeared sensibly increasing as to become exaggerated and dissimilar to that of old wines, in the samples longer electrified.

Previous to these first observations the samples gathered as aforesaid, in bottles lightly corked, with the exception of the latter, which was sealed, were placed in a room of the Physical Institute, which was at a constant temperature of 15° Centigrade, together with the sample of wine that was not electrified, that should have demonstrated its degree of conservability in comparison with the others that had received different quantities of the current.

After a sojourn of a year, with the conditions above described, I retook all the samples, held a microscopic examination, and then placed them under a chemical analysis, leaving the residue for an organolitic examination. It remaining now to try

the experiments, summing up the different phases

The electric current introduced in the wine produces in it a rapid turbidness, followed by the precipitation on the bottom of the vessel, of all the organic substances that it has in suspension, and of a portion of the albuminoid substance naturally contained in the wine. A very small part of this sediment coats the two plates of platinum, and being there in contact with the oxygen that is developed by the current, is darkened and entirely burned, adhering to the plates in such a manner as to prevent any further precipitation. The more or less duration of the current seems not to have any influence on the quantity of the extractive substance which is precipitated, since the results of the analysis show a perceptible constant loss in the samples, with the exception of Number 1, which has only lost 1.6 per thousand. It is not surprising if the diminntion of the extract is generally so considerable, because we must take into consideration the small quantity of wine subject to the electrization in comparison with the energy of the current received by it, and the size of the plates of platinum used. Besides the wine still very young has a very high degree of density, because of the azotte substances and the organism that it contained in suspension; the rapid precipitation of these substances immediately after the action of the electric current, and their presence instead in the sample not electrified, which was separately analyzed, has produced the marked difference in the results of the analysis.

Evidently, repeating the experiment on a larger quantity of wine which has been already a little reduced, even using platinum plates of the dimension suggested by Prolessor Blaserna, as more adapted for the electrification of large quantities-that is of six and eight centimeters in width, by thirty to forty in length, the loss of dry extract must be very small, and at any rate such as not to exceed in a perceptible manner that which takes place during the natural aging of the wine,

The results obtained on the coloring mutter have not been sufficiently precise as to permit to draw a conclusion. In the most of samples there was some weakness of color, and it would seem that it even increases with the increasing of the electric action: then there was not only interruption in this decoloration, but in the samples 4, 5, 6, and 7, the coloring intensity increased in comparison with numbers 2 and 3, which were fairly decolored, so that the sample 8 became nearly uncolored, and approaching the yellow color of a very old

There is no doubt, as it has been well color takes place under the action of the current, but new experiments are needed, especially on red wines, to determine with hetter precision how and in what proportion it takes place; which causes can thwart it, and to what limits it can be brought; because it could happen that to obtain a rapid aging, it would become necessary to use such a quantity of current as to deteriorate the coloring matter, or to cause too large precipitation that would damage the wine, by depriving it of one of its qualities most appreciated by the trade,

The difference in the alcoholic degree between the wine type and the first sample, which is the less electrified, is about 3.6 per

table and from the general proceedings of gression in such a manner that in the sixteenth sample it reaches the double of the first diff-rence, that is, 7 2 per hundred.

It seems evident that these two losses are due, the first to the formation of the acetic acid and to the fading of the alcohol during the period of one year, because of the samples remaining in contact with the air being lightly corked; the ground to the production of saccharomuses inwoderma vini and for a small portion to the evaporation of the alcohol being carried away by the little bubbles of gas developed by the electrolysis of the air. This latter loss increases with the increasing of the current in a sufficiently regular manner, and comparing the results of the analysis, we find that it has an average value of about 15 hundredth per cent for ev ry six hours of

From this amount may be deducted approximately what represents the loss of alcohol by elimination during the electrolysis. The sample number 18, which being more electrified than all others, of larger volume and hermetically closed, has remained free from acidity and slow evaporation, has given to the analysis 5,9 per cent of alcohol, that is a total diminution of 1.4 per cent on the sample type; this diminution, supposing it has taken place during the electric action, would correspond to about 0.07 for each six hours of current, and then the loss due only to the saccharomays: mycoderma should be of 8 hundredths per cent, without taking into consideration the difference occasioned by the gradual diminntion of the acetic acid.

These results have a quite theoretical value; because, if the current is applied to large quantities, preserved with care, the loss of alcohol would be very small, and commercially of no importance,

More important is the formation of acetic acid in relation to the duration of the electrification, because it affords a new criterion on the antiseptic power exercised by an electric current on the wine, and also, gen, erally, on any fermented or fermenting

In order to determine this action as carefully as possible, a wine was selected in the best condition to produce secondary alterations and fermentations, that is, a wine still rich of ferments and of azotic matters. In fact, the sample which was not electrified was soon changed into vinegar, and after-

wards the whole mass becoming putrified. On the contrary, there was no putrefaction in the electrified samples, notwithstanding the albugineous precipitation, which has produced a commencement of decomposition not accompanied by any formation of ammonia, ether, etc., as generally is the case. The very small granular form perceptible in the sample No. 4, probably demonstrated, that the precipitation of is only the product of this maceration, rather than decomposition, through which the azotic substance by remaining, during one year, in contact with the wine. This opinion agrees with that of Professor Pirotta, of the Botanical Institute of Rome, and is applied also to the circular forms observed in the sample of No. I2 and others.

The formation of the acetic acid stands in inverse ratio of the duration of the current, whilst the production of the saccha romyces mycoderma takes place in direcratio. This can be attributed to the diffi culty met by the two ferments in order to develop themselves at the same time, and to the superficial vegetation of the saccharomyces myroderma, which its biological the conclusions, both from the analytical hundred, and increases with regular pro- condition is less affected by the antiseptic vent fermentation.

diffused in the surrounding air. On the contrary, in the mass of the liquid all the alcoholic ferments are precipitated as soon as they become inactive, and the barterium acti, which alone is found living, must submit by degrees to the saccharomyes myco, derma vint, because of being directly exposed to the action of electricity,

In the sample No. 14, which has received one hundred and eleven hours, 14,76 ampere-hour, and in the following, there is not in the microscopic observation any bacterium aceti, although in the result of the chemical analysis there is, Nos. 14 and 15, a light expberance of acidity on that of the wine type, which may be considered as acetic acid. To still better determine until what limits these latter samples would remain free from acidity and other diseases, Heft the Nos. 14, 15, and 16 at the open air, without closing them, during all the summer and full. After this time 1 examined them with the microscope, and found them turbid from dust, formentst etc.; but none of them in a state of putrefaction, and only one, the No. 14, heginning to become acid.

The importance of these results ought not to pass unheeded, obtained, os they were, by simple and harmless means; and it is not improbable that they may find some useful application, even outside of the analogical field. If, in so unfavorable conditions, it was possible to make sterile the wine to such an extent, it is but natural to believe that by applying the electricity to large quantities, a sterility of the wine, nearly absolute, could be obtained. But it is necessary to make experiments on a larger scale, in order to learn approximately what quantity of current is required to make sterile certain known quantities of wine, with due proportion to the precipitation of the coloring matter, and to the perfume than is formed. For the present we may hold that a moderate application of current develops an aroma suitable to the wine; but if it it lengthened too much it produces a too pronounced scent, in which is also perceptible that of oxone, by which its value is determined, while the wine acquires preservative qualities that increase in direct ratio of the duration of the electrification.

The principle which has prevailed until now, that the electric current applied to tue wine imparts to it the character it acquires by aging is, in conclusion, a little displaced. We must take into consideration an antispetitic action of great energy, which, perhaps, can be more useful to the wine than the rapid aging which is produced from the same cause. It remains to study in what manner and measure these effects are compatible one to the other, both in the scienific and the analogical and industrial interest.

INFORMATION has been received at Washington that at the conference of United States Appraisers, in session in New York during the past week, it was unanimously voted that prune wine, prune juice and other similar decections and compounds used in the adulteration of native wines should pay a duty of \$2 per gallon as a compound of which alcohol is the component material of chief value, instead of 20 per cent ad valereom as heretotore classified, it having been proved by analysis that such compounds contain no fruit juice whatever, but that they are decoctions of glncose and deleterious drugs, with the addition of alcohol in their composition to pre

Prof. F. Lamson Scribner, V-getable face Pathologist of the U.S. Department of Agriculture, writes to Benj. Pratt of Orange, Cal., as follows

To me the disease of the vine in question. is as much a mystery as ever. In many respects it is like what the Italians name " Mal Nero , but if it be the same disease, we are no nearer a knowledge of the cause "Mal Noro" has been much studied in the leaves look as though they had be neared skin and rich in pure, are two varie-Europe, but no one yet has been able to say what causes it. The symptoms-the effects of the malady—are very well known the laf and eventually closes at the turn like Nobel, round, a hard-skinned, pully. now, but we have really got no further than brown, dry up and curl in on the upper sure but very said gape, is a favorite table this. I reported to the commissioner what face. I saw in the vineyards of your neighborhood, but I have prepared no report for publication, for the reason that I could found on the stalks and vines mentioned in throw no light upon the subject. I sertainly saw the same disease in Mr. Krug's the first section. The stalks and bereiss vineyard at St. H. let a. Napa county, , only half a doben or so vines were afficied, Mr. K. said that he hiel seen similarly affeeted vines in various vineyar ls for at least tou years past. The published accounts of the disease which I have soon assert that the roots are perfectly sound. In every case examined by Prof. Viala and myself we found the ultimate roofs is dead, often as the sides of wine, but for the grape's side (highest trees, causing dense shade). These pays. The best-keeping grapes are Vergens foot or more from their tips. Est it? The vine is cultivated up to 4000 feet of ele-will grapes with thick skins and large needs, ties. Mary, I-shella, Drans, Agawam, Clinconsed them to die? If we know, the thing would no longer be "mysterious"

REPORT FROM THE COMMISSI IN SEXPERT.

The btate Vincultural Commissioners received Oct. 11th the first weekly report from Professor Etheibert Dowleny, whom they commissioned as a specialist to inquirinto the disease that is making such a havoe among the vines in that section The Call says

The first work of the visit was spent i the San Gabriel Valley, and the investiga tion confined to the branch - and brave as it is thought too early to interfere wit the roots and stems with any present hopof successful result. The localities visite and examined were in the old parts of th vineyards, which are mainly planted wit the Mission grape, and are taken as a ful sample, as they are planted on differen soils, and on both high and low ground.

No definite conclusion has been arrive at as yet as to the cause of the disease, bo it is assuming large proportions in this sec tion, increasing every year for the past fiv years, prior to which it was unknown,

Many theories have been advanced b the grape-growers as to the cause, the mai one b ing that it was the result of the earl pruning; but none have been advancethat would ablite the disease.

Mr. Dowleny divides his report into tw sections. In the first he describes the stat of the vines that are either quite dead o almost so. Of these, the leaves have falloff, leaving the blaf-stalks on the branchand the grapes entirely dried up. Th green branches show on their upper surface slightly raised, warty patenes of a red brown and silver gray color.

The older branches, which have taken o their natural stable color, show a grabundance of spots of fungus growth. microscopic examination of the wart patches on the branches shows that the are due to the growth of a small fungus in mediately underneath the cuttele, where has formed a network of jointed branche

This growth has caused the epidermal cells in contact with it to become filled with a dark-brown deposit and has caused the tissue itself to form the warty excrescences,

On examination there leaves also show

numerous spots of fungus similar to the se-

THE GRAPES OF PERSIA

covering it up for the winter is requisite.

the discuss in the future.

treats of vines that are not so builty affected in ance resembling that if the strewberry rants (or rather lost then and at the point where the disease is supposed to originate. The condition of the forthight later. The Mobile val. grown both laws vines in this group veries from the loss of large, with thick skin and souls of a butter south toucketing at skins and loss sera few leaves and fruit to the loss of half tiste, ripen in August and are kept fresh vice to the por Persons instead of sugar the vine and its product. The principal into March, March, round berne very remolasses and is employed also by emcharacteristics not durithis group at that sweet and young and Lockers of dark ode fectioners. Surface about largery of for scorched along the out-rodge. This scorche bes proper for wine. Askeri wordless and Indians and Acord and handle grapes for ing always commences on the cit rody a first only skin keeps from all wint r, and, fermenting, is M handle I made Prohibi-2001 quidity | For rusius 8 (1%), of round berries, and Steeter so obling and dark colored, are used, and of the K's - SSE red-

mode. The Maderel-1883's, moth r and dark place, and bottling the product a also bear traces of the disease. The report child grape has obtained its name from the does not draw any conclusions at pres id, but promises a study and explanation of small one is place I on the brinch. Stiruz. grapes have bitter scods. Two mere varies ties besides many others, the Mooga and Kentste are also of good tasts for enting. The native grapes of Caspian S a, in the

Vitic ature in P rsia is carried on not for for six of Gillin, cover the tigs of the with ni and while in southern Persia it must are of good sweet teste, and produce a toleration and Salema keeping in the order be protected against sun heat; in the north ably good wine.

d the country protecting of the plant by , and us a them both fresh and preserved, until spring and Isab lla until March

finally rupturing the cuticle, and through The grape growers of the Ispahan region and fried. The Solid berries when the rupture the fungus has come to the sur- cultivate several varieties. The earliest, dried, called 8-bg by the Persians-may maturing in the middle of Jame, is the have originated the Italian word, " Ale, and In the second section Mr. Downing Added, a small, soldless grap with a frig. the Southern German word ribben, for car-

> Chair grapes, green and large, mature a. The most pressed from the grapes and the heistence of Leney, is nontellijn from unrip grapes. Only to bests this adher uts. A vite as ly fin-Vinegar forther A. Is if grape is of the A. Is stantly, and everything rotating to wine making in Personal dealely primitive Squeezing the grid -- with the feet, puting e lored, fine and so lless, currants are the pure in earthern vise is, quin, in a year later-these are the processes of Percurs us fact that next to every large berry; sian viniculture. The lest known wine is that of the Challer Valley, near Ispahau, and of Hamadam, t rolly alcoholic, and with it bequet,

A CHEESE NEEDS of Ply for Girle in named. Have t sted about seventy varie-The P raint cuts grapes with his bread, thes for several years. Vergennes will last

EAST BOUND THROUGH FREIGHT.

Forwarded by the Southern Pacific Co., September, 1888.

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AGENTS.

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ME. GEO. F. HOOPER, of Sobre Vista, Sonoma Valley, in a letter to a contemporary gives his experience with the Mission and Picholine varieties of olives which, in view of the interest now being taken in all that pertains to this valuable tree, is

FRIDAY..... OCTOBER 26, 1888

worthy of reproduction :

In 1880 I bought from Mr. West of Stockton 50 Picholine clive trees; these were planted on the hillside in good rich loamy soil and have been well cultivated each year. This is the first year that any of them have borne froit-a few trees having a few olives on them, and the berries are small. In land adjoining this, I planted in 1875 or 1876, about 100 Mission olive cuttiogs. The growth of these has been very fine and the trees have been bearing for the last eight years, the crop being heavier each year. They are free from all pest except a little of the black scale, which made its appearance some two years ago; was soon overcome by an application of a wash of concentrated lye, whale oil soap and sulphur, applied at 130° F. in July. The following October we gave the trees a washing of sal-soda and water at the same temperature. The trees are planted 24 feet apart, The mission trees planted in 1875 are from ten to twelve inches in diameter, and the Picholine planted in 1880, the largest, are about four inches in diameter.

THE FOLLOWING item may be of interest to wine merchants and others who may contemplate using the mails as the means of forwarding samples:

In response to a letter written by Postmaster Bryan to the Postmoster-General at Washington asking for a modification of Section 369 of the postal laws and regulations so as to allow merchants to send through the mails samples of wines when inclosed in sample packages lined with cork, etc., an answer has been received to the effect that, "on account of numerous protests from the officials of various States, complaining that this law would interfere with laws existing in these States, it was found necessary to exclude wines and liquore altogether.'

In consequence of this ruling, no package containing wines or ardent liquors, whether spirituous or malt, will be mail-

THE LATE shipment of raisins to London from Fresno by George W. Meade & Co. is an event of the greatest importance to this growing industry. The car was taken on the Southern Pacific through train, and contained 1000 boxes of raisins, weighing in the aggregate about 20,000 pounds. The freight rate on the shipment is \$1.40 per 100 pounds to New York. From the latter place to London the rate, it is thought, will possibly be 30 cents per 100 pounds.

The Mediterraneam or Malaga crop is now being marketed in both London and New York. In the latter market, however, the California crop was the first to arrive. which was some three weeks ago. But the Malaga crop has been in London now some weeks, and it is considered very significant that in the face of all this so large a shipment of the California crop should be demanded

Twenty acres of raisin vineyard, says the Southern California any of the raisin sections of Colifornia will give the owner a net frofit of \$2000 or \$3000 annually, and often more. But these figures are conservative. All the work required in that vineyard will not cover three months in the year, and it can all be done by one man, except the gathering and curing. That leaves nine months for rest, recreation or the pursuits of other avocations. This is no fancy sketch. Such land can be bought for \$75 to \$200 an acre. At the later price it will be contiguous to churches, schools, railroads and stores. Is there any other pursuit that will return an equal amount for the investment?

THE reports from the expert employed by the Viticultural Commission to examine into the disease which is now affecting the Southern vineyards will be found in an. other column. So far the cause is still undiscovered, but the examination is at present limited to the leaves, with the intention of taking stems and roots later on in the season, where former are not available. It is to be hoped that the investigation will result in the discovery of a remedy which will promptly check the threatened plague.

HEAVY SHIPMENTS of apples are now being made to Anstralia, and the demand is growing all the time. The Earl Fruit Company have just shipped twelve carloads on the Zelandia, and to fill further orders have been compelled to buy up the crop all over the State, and some of the crop in Oregon.

The Australians cannot raise as good apples as we do here, and they are ready to pay a good price for a supply.

THE VITICULTURAL Commissioners have issued a call for a special meeting to take place at the rooms, 204 Montgomery street, on October 26th. The object of the meeting is to make final arrangements toward establishing a permanent exhibit and Viticultural Exchange in Platt's Hall. The Viticultural Commissioners have already leased the hall and propose to furnish it as a permanent exchange where wine producers and dealers can meet, and where the products of every wine district in the State will be on hand in a pure state.

" THE MERCHANT "-The only recognized wine journal on the Pacific Coast.

THE LOS ANGELES VINE ROT

Reports of Investigation by the Viticultural Commissioner's Expert.

John H. Wheeler, Esq., Chief Executive Officer;

DEAR SIR:-Please find enclosed the weekly report of Mr. Ethelbert Dowleny as to cause of death of vines in this section. Sent at Mr. Shorb's requeet.

Very respectfully,

C. M. RANDOLPH.

San Gabriel, Oct. 6, 1888.

J. De Barth Shorb, Esg.,

State Viticultural Commissioner:

Private Secv.

Sin;-I beg herewith to present my first weekly report of work done in connection with the investigation into the causes of the desth of vines in this section.

In view of the comparatively short time that remains this season, during which the foliage of the vines can be studied, I have thought it best not to make any extended investigation of the stem and roots until the leaves and branches have been worked

I am, yours faithfully,

ETHELBERT DOWLENY, San Gabriel, October 1, 1888.

The investigation during the past week has been practically confined to the older parts of the vineyard, planted with the Mission grape, this part seems to be a fair sample of the whole, and, in addition, ocenpies both high and low ground. It has been traversed in various directions so as to cover all parts.

The vines throughout show the same general characters, and can be divided into two groups as follows.

In this group the vines are either quite dead, or almost so, all the leaves have fallen off, leaving the leaf stalks on the branches, and the fruit bunches have dried

This group containing the remaining vines proved to be more or less affected all through, both in leaves and fruit, varying from a few leaves, to more than half the

The leaves have all fallen off, leaving the leaf stalks on the branches, these leaf stalks are completely dried up from, either just at the point of union with the leaf blade, to almost the entire length of the stalk, and present a different appearance from stalks which have died in the natural course of things.

The green branches usually show on their upper surfaces slightly raised warty patches, red, brown and silver in color, these often exhibit slight fissures. The older brinches; which the bark has taken on its brown color, show abundance of small spots of fungus growth.

The fruit bunches, of all ages, on these vines are usually quite shrivelled up, and have all the stalks dried up in the same manner as the leaf stalks, these fruit stalks are usually covered with fungus growth.

In this group the vines very much in appearance some have a large proportion of the leaves and fruit withered, others have only a few leaves gone wrong, but in all cases the features are the same. The leaves look as though they had been scorched along the edges, the mischief has always begun at some point of the margin of the leaf, and has then spread inwards, the part affected has dried up, turned brown, lonly difference noticeable between the con

and curled in upon the upper anriace, an on almost every leaf examined, numbering many hundreds; the dead portion show numerous spots of fungus similar to tha noticed on the fruit stalks.

Some of the fruit bunches are quit spoiled, others only in part; the affected parts, and sometimes even plump berrie show spots of fungus similar to that notes

A microscopic examination of the leave shows that on the decayed portion there is a plentiful growth of a minute fungus, th spots on the surface being formed by th fructification.

Considerable time has been spent in at tempting to trace the fungus into the lea tissues, but at present this attempt has no heen successful.

The microscopic examination of th warty patches on the branches shows the they are due to the growth of a small for gns, immediately nudernesth the coticle where it has formed a network of short jointed branches, this growth has cause the epidernal cells in contact with it to be come filled with a dark brown deposit, an has caused the tissue itself to form th warty excrescences, finally the cuticle ha been ruptured, and through this ruptur the fungus has come to the outside. I this case also the attempt to follow the fur gus growth deeper into the tissues has no yet been successful.

Numerous instances were observed, o the branches, in which the fungus spore had lodged in some of the numerous irregr larities of the surface and had just hegu their growth. Further examination of a these is, of course, necessary.

ETHELBERT DOWLENY,

San Gabriel, Oct. 1st, 1888.

J. De Barth Shorb, Esq., State Viticus tural Commissioner:

S1a :-Herewith I beg to present my acc ond weekly report of work done in conne tion with the investigation into the cause of the Los Angeles vine rot.

Much time has of necessity been take up by the microscopic work, which doe not make a great show on paper, hence th shortness of the accompanying report.

Yours faithfully, ETHELBERT DOWLENY, San Gabriel, Oct. 8, 1888.

LATEST REPORT.

John H. Wheeler, Chief Executive Office l'iticulturul Commission :

DEAR SIE :- Euclosed please find secon weekly report of Mr. Ethelhert Donleny Forwarded at request of Mr. Shorb.

Very Respectfully,

C. M. RANDOLPH, Private Secy. San Gabriel, Oct. 9, 1888.

During the week fresh parts of the vina yard have been gone over and the micro scopic examination of the leaves an branches has been continued.

The examination of fresh parts of the vineyard, planted with other varieties, an containing younger vines than the portion previously examined, has not revealed an new features of apparent importance so fa as the parts of vines above ground are con cerned

The younger vines have gone off in th same manner as those much older, her and there single vines, and in other place groups of vines have been attacked, the ition of the younger vines and the older lants is the extent to which the vines have uffered. Amongst those examined the dataro and Burger varieties have suffered Infandel, Carignan, and Grenache having. n this vineyard, suffered but little.

Some wild vines in a neighboring canyon o which attention was called, were visited they seem to have gone off in a manner omewhat similar to the cultivated vines.

The microscopic examination of the eaves and branches has involved the makng of a large number of sections, but the ungus meutioned in last week's report has not been traced any deeper into the tissues ainty. In the case of the branches, a funepidermis, the difficulty is to determine the lepth to which it penetrates. In connecion with this part of the subject, the black lungus, covering the leaves of clive and brange trees, has been found to contain, in addition to others, forms quite like those really the same remains to be seen.

-Up to the present no traces of any insect have been found on the affected vines.

ETHELBERT DONLENT.

San Gabriel, Oct. 5, 1888.

WHOLESALE MARKET.

Quotations given are for large lots to the whole CHITMORNIA RUMINA

Halves, Quarters and Eighths, 25, 50 and 75 cents

aigher respe	ctive	y than v	rhole	poz !	Lines			
London Lave	rs, ch	mier per	hox		\$1	65 7	1 73	>
9.5	fati	C3 11	4.1		1	mal 1:12	2.48	ŧ
Lavers, per l	200				1	50 α	1 63	5
Loose Musca	tels, e	common.	per.	hov	1	40.a	1.54	J
14 44		hoice,	1+	17	1	55 a	1 64	1
** **		ADCY.	1 .	17	1	Bille	1 ~	ì
Unstemmed	3 4 1	B Backs.	per :	t		4 h. cr	- 5-	
ftemnied	9.3	* >	4.5			1.2 CE	برعادي	
Seedless	9.0	4.1	+ #			4 0	5+	
**		per 20				\$43 gr		
** Sultanas,	unbl	eacher, i	n bor	ces, b	п	6 g		
4.4	1.7.	echod.	*1	44		642		

CANNED GRAPES Gapes, Muscat, 23_2 to $-8 \cdot 1 \cdot 10 \cdot a \cdot 1 \cdot 50 \cdot 6$ axis $-1 \cdot 50 \cdot 6$ axis $-1 \cdot 50 \cdot 3 \cdot 2 \cdot 45 \cdot a \cdot 2 \cdot 45$

...... $33_4 \cdot g \cdot 4$ Sun Pried Grapes, Stemless, sks,. Unsterned, sky, 585 "

Sugar Quotations

California Sugar Refinery price list dated October 23rd Circle A. Pat Cube, 7 cc: Circle A Crushed, 7", c: Fine Crushed, 7", c Extra Powdered, 7°,c. Dry Grannlated, 7°,c. Confectioners' Circle A. 7°,c Extra C. 634c; Golden C. Sc; Star Drips Syrup, in bbls, 20c, bf do, 221 c; 5-gall kegs, 271 c: 1 gall tins, 371 c per gallon.

Price list of the American Sugar Refinery dated October 23rd Extra Fine Cube, in bbls, 73, c: Circle A. Crushed, 71,c: Fine Crushed, 77, c: Powdered, 77, c. Extra Fine Powdered, 81,c; Dry Granulated, c. 712XX Dry Granulated, 71, c. Confectioners' Carcle A, 73 ,c; Extra C, 63 ,c; Golden C, 61 ,c, American Golden Syrup, in bbls, 20c per gallon

Is THE San Francisco Market, Table Grapes are in light supply and very firm at an advance in prices. Wine Grapes are in fair demand, W ote Wine Grapes \$12 00ca \$15 'pt ton for Zinfandel and \$10 00 j (a \$15 00 for other kinds; Table Grapes, 20@ 25e 7 box for Black, 60@ 75e for Corn ichons, 50ca 35c for Sweetwater, 30ca 60c for Tokays and 60or 75c for Muscot.

THE LOS Gatos and Saratoga Wine and Fruit Company has manufactured to date 120,000 gallons of wine, mostly claret, and lighter in quality than that made last somson, the demand for the table being for wine with less - eight and sugar,

OF INTEREST TO WINE MAKERS, manufacturers. In May of last year the

Messrs, Charles Memecke & Co. of this city, and the additional ton francs were to be westward, bringing with it new idea- lased uost, the former severely; the Tronsseau, explains itself and as its contents seem to paid, not only on sugar subject to taxation, on the broader and firmer views, developed call their attention to its importance.

EDITOR MERCHANT

We beg herewith to submit to you the! following extract from Mr. A. Chevalherwine merchants of California. He says about Cenotamin for white and red wines. I recommend carnestly that it be with sufficient clearness to amount to cor- sprinkled on the grapes when they are going into the crushor or press, in order that gus does certainly exist in the tissues of the lat may pass, in the must, through the fermentation, controlling and regulating it, and that it may show its beneficient effect upon the young wine. This is for European i wines, and the best method of using it. The tienotannin can how ver also be used on ferme nited wanes, young and old, as wanted, ound on the vines. Whether they are For the clarification afterwards of white and red wines you can safely recommend my Pulverme as superior to any clarifier used; its reputation is firmly established in all wine-making countries, and I am confident that your California wine makers will recognize its great merits after the first trial.

and referring to our advertisements

Yours, very respectfully,

CHARLES MEINECKE & Co.

1'. S .- In conclusion we beg to state that Chevallier-Appert's O-notanniu and Pulverine have been analysed by 1 refessor. Rising of the State University, Berkeley, and recommended as perfectly safe for use in wines.

THE FOLLOWING telegram was no ntly sent to Congressman Morrow at Washington, D. C.

Hon. W. W. Morrow, House of Representatives, Washington, D. C.: The undersigned wine-dealers and members of the Wine-Doalers' Association of this city most earnestly oppose that part of the Senat-Tariff Bill, Schedule H, placing only six cents specific duty per gallon on fruit juices. The adulterations of American wines herebefore complained of have been accomplished mainly through the use of cherry price, which comes in under the denomination of fruit juices in tariff schedule. We look with alarm at the low tariff proposed for these articles as calculated to jeopardize the best interests of American wines, and especially those of our State. Fruit juices should pay the same duty as wine under 24. per cent alcehol, and we carnestly urge you to use your best influence to seems a measure in accordance with these expressions.

Signed Arpad Haraszthy & Co., J trundfach & Co., C. Schilling & Co., Koh-t ler & Frohing, Napa Valley Wine C Jer & Van Bergen.

BLET SIGAR DITIES IN FRANCE

The London Economy says. A bill is the sugar exported. now under discussion in the French Parlia. ment to modify the sugar duties for the fourth time since the law of 1884 with a view of dinamishing the bonns obtained by in the Last

be of special interest to our California wine but also on the portion which was all west by the costly experiences of a century in makers and wine merchants, we cheerfully to go free, amounting to nearly one-third older entes of the Lastern Spates. Local lof the production, the best root being improvements most 1 glostered in Fourned worked up being taxed at any stimated yield, out, and in this contact is in the condition I coper cent, whereas in that year it pro- of our streets is of permanent importance dueed nearly 9 per cent. The new duty. The power in this direction for good or ill consisted, consequently, of a principal descent the Superintendent of Streets, an esting and us ful to the wine makers and duty of 50 francs per 100 kilograms 2 office about to be fide fat the approaching cwt , and a supplementary duty, or surfax. election. The present meaning at, who is of 10 france. The Government has now also a candidate for respection on the prosented a bull to reduce the principal Democratic toket, has not finfilled the exduty to 40 francs and increase the surfax to protations of the people who placed him 20 francs. The total duty on taxable sugar in office last obstron. This will undoubtremains the same, or (0 francs, but the olly elect Irvine Graham, the Republican duty on the surplus is to be increased from Nominee, who, irrespective of the benefi-In to 20 france, and the bonus or bounty, real qualities generally ascribed to new when sugar is manufactured in bond for brooms, can be depended upon to conduct exportation, becomes reduced from 50 to 40, the business of his office untaminated by francs. Friends of the matufacturers, millionaire or co- quantive influences, which comprising all the agricultural party in the have been the lane of the present regime, hamber, oppose the bill as an act of bad faith in taking back from producers a concession which had served as a basis for lines for the position of Sherift, is a gentletheir operations. The Minister of Finances man who can be depended upon to fill this replies that manufacturers will obtain a most important office in a manner which will partial compensation in the further increase or fleet erodit on the party. He is no seeker in the yields this year to nearly 91, per after political preferment, and his nominacent. It was, besides, never contemplated tion is the result of desire upon the part of that so large a portion of the revenue, a convention composed of representative the notice of the wine interest of Califor- should be lost. In the first year of the citizens, to place before the electors of this nia, we beg you will kindly insert the above system, established in 1884, the bonus of city, names which will be a guarantee for in the next issue of your valuable journa! the manufacturers amount d to 25,000,000 honesty in the management of public affairs, francs, in the second to 43,000,000, in the | free from all taint of boss influences. third to 92,000,000, and in the present year | Mr. Laumeister has been identified with with the surfax of 10 francs, it will still the commercial interests of this city for the amount to 64,000,000 francs. The public past twenty years, as proprietor of the will have, consequently, pend in four years mills which bear his name. His acceptance 225 000 poor france in the form of duty on of the remination is a fitting subject of sugar not received by the treasury. It is congratulation among all who have at true that the price of duty-paid sugar in heart the future welfare of San Francisco. France fell from 104 francs per 100 kilograms in 1884 to 37 france 50 centimes in 1887, notwithstanding the increase in the duty from 40 to 60 francs, and manufacturers pretend, which is, no doubt in a measure true, that the bonus has been shared between them and the consumer; but, on the other hand, the price of raw sugar has also fallen from the increased production, and to prevent Belgian, and German sugar entering France, a surfax of 7 france is levied on European sugar. The posent bill is still under discussion, but in one or (we divisions taken the majority for it was two to one, and little doubt exists that it ! will be voted. The law wound, however, only be applied from S-pt-inb-r 1 next. An bounty on French sugar export data Engage place cheaper material, but more costly band. The legal yield or taxable portion of ber I last from 6 to 7 per cent. A manufacturer working in bond for export dispercent, of the weight of best root taken ble or cost in order to learn the special in, and sells the surplus in France on pays ment of the surfax of 10 frames per 100 errormet does, combined with the sterling kilograms, the difference of 50 francs becoming sof British productions, give them Lachman & Co., B Dreyfus & Co., low the preper duty of 60 frames forming the first place in this market - Germany C. Carpy & Co., Lachman & Jacoba, Koh- the indirect bounty. As the surfax is to be the a both carying an a highly successful raised to 20 frances the bounty will become North America. A special mention in this reduced to 40 frames, but it will be obtained adepartment is the to the British in anufacon a quantity equal to about co-fourth of turer who supply a pper, brass and iron

Sixp the

San Francisco has now army d at the excise duty paid on sugar for home con- most interesting period of its history. The The following but r addressed to us by sumption was raised from 50 to defrance, wave of progress is acadually sweeping

C. S. LAUMFISTER, the Republican Nom-

CUBA SIGAR MACHINES

The German official Hambes Archie reports from Havana. "Machinery gives rise to great compention between French, British, German and American makers. Nine tenths of the machinery imported into Cuba is for the sag ir industry, and the remaining for manufacturing purposes of various kinds. French makers occupied a very favorable position at one time, hat this they have larg by lost, owing to having neglected to keep up with the changes which have gone on in sugar machinery The share of Great British in the supply of machinery is a large one. In comparison with the United States, Gr at British supthe advantage in the scarticles in which the competition with France, Great British and apparatus for the countacture of sugar The value of the terminal import of this Classific de in pratons years may be ra-MEDITARY to in friends timested at all at 2 section marks, but in 11887 it and equaled Sequent marks,

OUR WINE SHIPMENTS NATIVE BYSEA.

PER P. M. S. S. CO'S STEAMER CRANADA, OCT. 15, 1888.

TO -	NEW	YORK.

	SHIPPERS.	PACKAGES AND CONTENTS.	UALLONS	1.861.6
\ Co	B Dreyfus & Co	10 barrels Wine	498	836
**	* **	25 barrels Wine	1,247	62.
Н	*1	1 barrel Wine	50	til
H C		1 barrel Wine	50	4
H G M	Napa Valley Wine Co .	6 barrels Wine	303.	1.5
11		1 half-barrel Brandy	25	- 5
v	Carpy & Co	2 half barrels Brandy	56	12
	**	16 barrels Wine	796	32
К	**	2 half harrels Brandy	56	13
& Co		28 barrels Wine	1.395	60
G	**	15 barrels Wine	752	25
C	**	2 barrels Brandy	94	20
М	**	1 cask Wine	61	10
К	Lachman & Jacobi	46 barrels Wine	2,339	1,22
- 11	11	2 barrels Brandy	95	2:2
V Co	C Schilling & Co	20 barrels Wine	946	47
S	**	2 octaves Wine	55	- 1
н н	**	Boctaves Wine	82	ŧ
14	**	2 cases Brandy		- 1
Н С		3 octaves Wine	51	ş
H				
40	**	12 half-barrels Wine	720	36
C		2 quarter-casks Wine	65	1
		50 barrels Wine	2.488	1.49
in diamond Bros	A Netter	24 barrels Wine)	1	
11	*1	19 half nurshoons Wine	,	
18	**	2 puncheons Wine	2.600	6.
F	Kohler & Van Bergen	10 casks Wine	1.079	31
**	to the tall being and	Sharrels Wine	246	
in diamond	**	15 barrels Wine	737	26
44		10 half barrels Brandy	246	40
In diamond	1	50 barrels Wine	2,455	8:
Rene	Nana Valley Wine Co.	2 barrels Wine	1027	0.
41	Mapa valley with Co.	1 case Wine	102	
		4 0000 1440		

TO CENTRAL AMERICA

FA, Corinto J Gundlach & Co. 2 cases Whiskey \$17 A E J, Puntas Arenas " 4 barrels Wine 189 118 " 4 kegs Wine 75 52 " 60 cases Wine 23 62 R P, La Union " 16 cases Wine 64 R S, La Union " 4 cases Wine 54 40 F A, Corinto " 1 keg Wine 15 15 12 F A, Corinto 4 cases Brandy 28 21 24 24 24 24 26 27 24 27 27 27 24 27 27 27 27 27 27 24 27 24 27 28 27 28 27 28 27 28 27 28 27 28 27 28 27 28 27 28 27 28 27 28 27
A E J, Puntas Arenas " 4 barrels Wine 189 118 " 4 kegs Wine 75 52 R P, La Union 16 cases Wine 64 R S, La Union 22 Js, barrels Wine 54 A Corinto 4 cases Wine 54 F A, Corinto 4 cases Brashly 98 A D, Oces 54 A D, Oces 64 A D, Oces 65 B L G Steele & Co 70 C La Libertad 75 B V, Ampala Wine 50 D T, Puntas Arenas 17 C T, Puntas Arenas 17 C V R Q in diamond, La Uniou 6 packages Wine 54 B V, Margha Marcha 17 C V R Q in diamond, La Uniou 6 packages Wine 54 B V, Margha Wine 75 B V, Margha Win
1
R P, La Union 16 cases Wine 237 R P, La Union 16 cases Wine 64 R S, La Union 22 by harrols Wine 54 F A, Corinto 16 keg Wine 55 F A, Corinto 17 keg Wine 95 A D, Oces EL G Steele & Co. 20 cases Wine 97 O C, La Libertad John T Wright & Co 1 barrel Wine 50 R V, Ampala W Louiza 6 kegs Wine 99 P T, Puntas Arcnas Urrela & Urioste 14 kegs Wine 27 Q & Q in diamond, La Uniou 6 packages Wine 57 La packages Wine 58
R S, La Union 24 cases Whiskey 54 32 32 32 32 34 34 34 34 34 34 34 34 34 34 34 34 34
R S, La Union 22-y barrels Wine 54 40 F A, Corinto 4 cases Brandly 28 F A, Corinto 5 4 40 F A, Corinto 6 4 40 F A, Corinto 7 4 cases Brandly 28 F A, Corinto 9 4 57 F A D, Oces 7 1 keg Wine 94 57 F A D, Oces 9 1 28 F L G Steele & Co. 20 cases Wine 70 F C, La Libertad John T Wright & Co 1 barrel Wine 50 30 F V A Mapala W Loaiza 6 kegs Wine 99 73 F T, Puntas Arenas 12 Crrela & Urioste 14 kegs Wine 27 F C, W Q in diamond, La Uniou 6 packages Wine 56 F A CARAGES Wine 159 F C P A C V C V C V C V C V C V C V C V C V C
F A, Corinto
F A, Corinto
A D, Oces E L G Steele & Co 20 cases Wine 99 57 1 kg Wine 28 71 1 kg Wine 70 71 71 71 71 71 71 71
A D, Oces
A D, Oces E L G Steele & Co. 20 cases Wine. 70 O C, La Libertad John T Wright & Co. 1 barrel Wine. 50 30 R V. Amapala W Loaiza. 6 kers Wine. 99 73 A Cases Wine. 120 120 120 P T. Puntas Arcnas Urrela & U
O C, La Libertad John T Wright & Co. I barrel Wine 50 30 R V, Amapala W Loaiza 6 kerg Wine 99 73 P T, Puntas Arenas U rrela & Urioste 14 kerg Wine 278 24 Q & Q in diamond, La Uniou 6 packages Wine 46 48
R V. Amapala W Loaiza. 6 kegs Wine. 99 73 P T. Puntas Arenas Urrela & Urioste. 14 kegs Wine. 278 214 Q & Q in diamond, La Uniou. 6 packages Wine. 46 46
P T, Puntas Arenas Urrela & Urioste 14 bezs Wine 120 Q & Q in diamond, La Uniou 6 packages Wine 48
P T, Puntas Arenas
12 packages Wine 58 Q & Q in diamond, La Uniou 6 packages Wine 46
Q & Q in diamond, La Uniou 6 packages Wine
Q a Q in distribut, La Cittou
H G in square, Corinto Sperry & Co 2 cases Wine
E R, La Union B Dreyfus & Co 4 barrels Wine
" 6½ bariels Wine
V H, La Union
C.P. San Jose de Quat F. Meeks
" 1½ harrels Wine 14 8
L & C, San Jose de Quat Schwartz Bros 25 cases Wine
J C, Corioto A Greenbaum & Co., 3 half-barrels Wine
C S, Corinto E Keinen & Co
M. M. Corinto
S D P, Corinto
B B & Co., La Libertad Bloom, Burneh & Co., 1 half-barrel Wine
" 3 half barrels Wine
E C, Corinto Eng de Sabla & Co 5 kegs Wine 95
L C, Amapala
M A, Champerico Cabrera, Roma & Co. 12 kegs Wine
Total amount of Wine, 197 cases and
Total amount of Brandy 4 cases and
Total amount of Whiskey, 26 cases and.

TO MEXICO.

O H, San Blas Thannhauser & Co, 2 cases Wine		
2 kegs Wine	30	33
L & W. Mazatlan L F Lastreta 1 keg Whiskey	ō	15
L & W. Mazatlan	59	24
J M, San Blas J O Meyerink 3 barrels Wine,	150	
H S, San B(as 1 barrel Wine	48	40
H S, San B(as	115	46
Total amount of Wine, 2 cases and	402	\$305
Total amount of Whiskey	5	15

TO PANAMA

M C	Urrela & Urioste 50 cases Wine		189
J V	A G Chanchi 1 case Claret		- 3
**	1 case White Wine		4
J M	LF Lastreta 15 cases Wine		45
*1	1 cask Wine. 1 half-barrel Wine	60	27.
**	1 half-barrel Witte	28	8
Total am	ount of Wine, 67 cases and	88	8276

нт		C Carpy Co 2 half barrels Wine	54	854
	TO	HONOLULU - PER STEAMER AUSTRALIA,		
N H		Wilmerding & Co I barrel Whiskey	301	840
G in diamond		Donald Gedge 200 kegs Wine	1,400	1.16-
FAS&Co		. C Schilling & Co 2 easks Wine	124	7.
*1		2 barrels Witte	titi	40
н Ј		Wilmerding & Co . 5 cases Whiskey	12	5
*1		Arpad Haraszthy & Co 5 barrels Wine	217	173
4.6		" 50 kegs Witte	250	22
**		" 13 kegs Wine	130	10
W.S.L. in diamond		S Lachman & Co 4 barrels Wine	206	18
W L L		Lenormand Bros 3 barrely Wine	151	ัย
Total amount	of Wan	key.	2,574	\$2,06

MISCELLANEOUS SHIPMENTS

DESTINATION.	VESSEL.	RIG	OALLONS.	VALU
Honolulu,	Forest Queen	Bark	657	-
Altata	E Schroeder	Schooner	352	
Japan	City of New York	Steamer	153	
Kahulin	Anna	Schooner	69	
Victoria	Mexico	Steamer	614	
Japan	Belgie	Steamer	192	
Scotland	John McDonald	Ship,	50	
England	::	Ship	26	
France		Ship	204	
Total			2,315	81
Total shipments by Par	numa steamers		7 gallons	\$11,98
Total Miscellaneous shi	pinents,	4,88	g " +-	3,27
Grand totals		26.76	26	815.25

300,000 FRUIT TREES TRUMBULL & BEEBES'

We offer for the season of 1888-89 a large and very complete assortmen FRUIT TREES grown absolutely without irrigation.

Also Ornamental and Shade Trees, Nut Trees, Orange and Lemon Trees, Small Fruits, Grape V Evergreens, Hedge Plants, Shrubs, Roses, Buibs, Seeds, etc., etc.

LARGE STOCK OF OLIVE TREES, ALL SIZES. JAPANESE TREES AND SHRUBS IN GREAT VARIE Correspondence Respectfully Solicited.

TRUMBULL & BEEBE,

419-421 Sansome Street,

SAN FRANCISCO,

CALIFORE

For Public Administrator.

JAMES C. PENNIE

(Present Incumbent).

For City and County Attorney,

GEO. FLOURNOY, Jr.

REGULAR DEMOCRATIC NOMINEE.

C. S. LAUMEISTER,

Republican Nominee for

SHERIFF.

OLIVE TREES,

RESISTANT VINES

Also all varieties of Rieslings, Palms, Roses, and a general assortment of Evergreens, including Redwoods, Madronas-all well established. For sale at

Canyado Nursery, P. O. BOX 86,

Redwood City, San Mateo Co., Cal.

FRUIT AND NUT TREES

(Large Assortment);

CRAPE VINES.

RESISTANT GRAPE VINE STOCK.

Ornamental Trees, Olive Trees,

ORANGE TREES,

AND GENERAL NURSERY STOCK.

22 All Unirrigated and Free from Disease. Total

Address.

LEONARD COATES,

NAPA CITY, - - CALIFORNIA.

FROM LEFT TO RIGHT.

Dr. Delannay, a French scientist, ass that centrifugal movement of the hand that is, from left to right-is character of intelligence and higher developm centripetal, or the reverse, is indicative incomplete evolution. He suggests thi a scientific test in employing servants others. To ascertain the qualities o applicant cook give her a plate to clea a sauce to make, and watch how she m her hand in either act. If she mov from left to right, or in the direction of hauds of his watch, you may trust her the other way, she is certain to be at and incapable. The intelligence of pe may also be gauged by asking ther make a circle on paper with a pencil, noting in which direction the han moved. The good students in a ma matical class draw circles from left to r "Down East" a similar test of "facu has existed from the earliest day. Yankee farmer would hire "a hand" "storekeeper" employ a clerk who sh whittle to him instead of from him.

PRINING IN AUTUMN.

An experienced grape culturist, in Plar Gardening, for the benefit of proj tors, says: I would, when pruning i autumn or winter, preserve as much o well-ripened wood as possible, and, cutting into lengths of about one foot, in boxes of sand and place in a cool of antil spring, when they can be placed side, choosing a moist and somewhat sh situation. Plant in mellow soil in made by a spade and firm the earth about them. Keep them in rows eig ten inches apart, and five or aix apa the row. If possible, let each cutting three buds, one at the top, one at the tom and a third in the middle, to be I the surface of the ground when the cu is planted. Thus treated no mulchi required, but they must be kept free weeds.

Subscribe for the MERCHANT.

or 240 acres in one place and 208 in the Two hundred acres in Sonoma County, Vill sell at a bargain.

For particulars apply to

INCORPORATED ISSI.

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THE VINE LEAD.

In disensing the following item which appeared in the Vineyardists recently, recomending a process which the editor wisely says should be tried "on a few vines only." Dr. McCarty says:

"A writer, who claims to speak from actual experience, says that the perfect ripening of the later varieties of grapes can be assured, in good season, by clipping off the longest vines a foot or two, in summer, about the time the fruit is coming to its full growth,-the season given being that the sweet juice required to sustain these longest canes at their ends will then be appropriated by the fruit, and aid both in ripening it early and making it sweeter then it would otherwise be. We advise trying this experiment on a few vines only, and with caution.1

Against this pruning some objections may be made on purely scientific grounds. A continued series of investigations have been made in the grape producing regious of France, showing that a most important part in the formation of the fruit is performed by the leaves of the grape-vine. A sarge number of analysis show that the leaves coutain glucose (grape sugar) and cream of tartar, substances which enter largely into the composition of the grape, M. Macagno, a very eminent scientist, found in the month of June, in one kilogram of leaves, 14.24 grammes of glucose and 7.4 grammes of tartar. As the season advanced, these quantities increased, until at the vintage, they had nearely doubled. He also found these substances in the branches, but in smaller proportions, and he concludes that the leaves are the laboratory in which the first material of the fruit is formed, and that from there it is conducted by the branches to the clusters. After the grapes had rinened, these substances mentioned disappeared from the leaves almost immedi-In July, 1887, he removed the leaves from a certain number of vines in a vinevard under full culture, leaving the remainder in their untural condition. The analysis which he made in September showed that the latter had produced per kilogram 620 grammes of pulp, while the others only 581 grammes, and the proportion of Saccharine matter was 175 grammes to 140. This at least shows us that the leaf is more than a mere shade to the viue. To ent off these "green banners" in order to let in the sun-light as some argue, and thus to hasten the ripening process would be according to M. Macagno very much like the man who planted his beans and they came up"wrong end to" and so pulled them up and reversed them. It is best to "let nature have her way"-She is very wise, and if interfered with generally resents the insult.

It is well to note the experience of viueyardists in other lands as well as in our own country. French horticulturists and vineyardists have carried science to very great perfection. For instance it has been ascertained that the grape undergoes certain changes while ripening. During the process they revolve curbonic acid in darkness as well as in the light when exposed to the air or put in an indiffrent gas. The amount of oxygen evolved in air is always in excess of the oxygen taken up; this has been remarked in the case of observations extending over a long space of time. Grapes absorb or give off water according as they are placed in a moist or dry medium. As the change goes on the acids decrease in a citizen of Riverside, the Press and Horti do? He knows that he gets as much for wish to live another century.

amount while the quantity of sugar increases The acids and the glucose are carried to the grapes by the sap. Here the acids are slowly consumed, while the sugar increases in point of concentration, and at a still later stage the sugar itself is consumed. Every grape vine is one of Nature's laboratories-where the delicate combinations are being fermed constantly,

WASHES FOR FRUIT TREES.

D. W. Coquillet of Los Angeles on washes for fruit trees says: While the spraying of trees for the destruction of scale insects has not proved as satisfactoay as could be wished, yet when properly done, and an effective wash has been used, it has had the effect of greatly lessening the number of these pests upon the trees thus sprayed, and while there is every reason for believing that the gas treatment will in the main supersede spraying, yet there will always be cases where it will be desirable to use a wash of some kind, such as upon plants or vines trained against a wall, or otherwise so situated that it would be impossible to cover them with a teut prior to famigating them.

One of the best washes I have used for the destruction of scale insects consists of caustic soda, resin and water, in the following proportions: Caustic soda, one pound; resia, ten pounds; water, to make forty gallons. The caustic soda is first dissolved by boiling in one and a half gallons of water, and when dissolved one half the solution is taken out, and the resin added to that remaining in the kettle. If this precaution is not taken, and the resin is added to the whole of the soda solution. the latter is very liable to "boil over." Atter all of the resin is dissolved, add slowly the balance of the soda solution. and boil until the mixture will assimilate with water; this can be ascertained by occasionally dipping out a small quantity of the mixture and adding water to it, as when properly cooked it will assimilate with water, like milk, but if it has not heen boiled sufficiently it will form a ropy mass in the bottom of the vessel. During the boiling process the solution should be frequently stirred, and if it shows signs of boiling over a small quantity of water should be added, but not too much, or the cooking of the mixture will be delayed. While the mixture is boiling a foam will be formed upon its surface, usually equaling in height the depth of the mixture in the vessel, being composed of very small bubbles. On one occasion, when I was superintenging the boiling of some of this mixture, the latter did not form such a foam upon its surface, but in its stead produced lubbles; this doubtless resulted from the fact that the mixture did not contain a sufficient quantity of the caustic soda solution to properly saponity the resiu; accordingly I added more of the soda solution, and in a short time the mixture produced the usual foam in small bubbles upon its surface. When sufficiently cooked that it will assimilate with water like milk, which it resembles, it should be measured and poured into a barrel or vessel, and sufficient water added to make forty gallons; the water should be added very slowly, the mixture in the mean time being thoroughly

RAISINS.

From a private letter from a prominent commission firm of Chicago and Boston, to

culturist makes the following extract, which we publish for the benefit of our raisin producers:

"The raisin situation has been more unsettled this year than we have ever known it. Certain parties have spread reports of there being enormous crops in California and Europe and that the result would be very low prices. As buyers always believe the ones who tell them this, the contradiction of those who had facilities for obtaining reliable information have been ignored, with the result that we are now on the edge of the active demand and no one has any raisins. The result has been an advance in the past few days from 61% cents for Valencias, a loss, to 71/2 cents, which is as low as they ought to have been at all. The present estimates are 750,000 boxes for your crop,—or just about the same as last year,and 2,500,000 boxes of Valencias, 860,000 less than last year, with the Malaga crop so small as not to cut any figure for this country. This makes a total reduction of 1,500,000 boxes in the crop of the world from the figures at first predicted. much for statistics. The demand is just beginning and we see no reason why it should not be as active as usual this year. The quantity of California raisins sold has been very much exaggerated as well as the prices obtained, certainly none of our buyers have made any large purchases. If you have now any raisins for shipment you canno' ship them to soon to strike the best market.

RAISIN PACKERS AND PRODUCERS.

The present system in the raisin business and the relation between packers and producers is considered, says the Fresno Expositor, as very unsatisfactory to the raisin growers, and will no doubt soon be considered the same by the packers them selves. Its chief defects are that it lowers the standard of raisins all around, and thus tends to destroy, or at least seriously injure the business. A few pears ago, when the raisin business was yet in its infancy and the growers did their own packing, their constant endeavors were to produce as large and fine raisins as possible, and rivalry between large and small vineyards produced excellent results. When the packers started in they were hailed with delight by every raisiu grower, and it was with good reasou expected that the business would not only be simplified, but it would be greatly henefitted, and the standard of the raisius both as regards quality of berries and pack graffy advanced. Experience, however, is proving that these hopes are not being fulfilled. If these same methods now ememployed be maintained a few more years to come, we are satisfied that the high standard of our raisins will not and cannot be maintained. The fault does not lie with the packers alone, but in the system employed and the raisin-grower in throwing all the care of packing on the packers at the same time is responsible for much of the mischief done. In the early part of the season the packers contract for raising dedelivered in sweatboxes at a certain figure per pound-say, five cents, as at present. They stipulate that the raisins are to be delivered within a certain period, the earlier the better. The raising are assorted in two grades-loose and in layers-but for these no difference is made in the price paid. All the raisins must be overdried, else they will not be accepted. These, in short, are the terms. What does the raisin-grower

his small bouches, his loose raising trash, as for his largest, finest c which need more care and dry slow all his endeavors are concentrated in his raisina quickly, so as to get to market and get his money. To quick drying, he favors a quantity o bunches, which dry so much faster th large ones, and the latter he cuts vides so as to make them dry quicke no premium is paid for large b and fruit with intact bloom, the take no special pains in handling bunches, and, with the system em he is not only warranted in this o way of handling and curing his but forced to do so. We know of ers whose whole crop was left to d sun-scald on the vinca who actual paid as much for foorth-class rai those who had taken pains and special time and money to produce class article. What the outcome system will be is not difficult to see stead of being at the head of the li will be at the tail end, and once on: tation is ruined we will have grea culty in regaining the same. As to dies, there are at least two. One is terested growers to join or pack sep so as to get a high standard; the o for packers and buyers of raisins in boxes to pay according to quality, a according to bulk. Loose layers an tera should all be paid for separatel effect would be that all the careless ers, who now step in to divide the with those who, with care and exper of money produce the No. 1 grade, find it to their advantage to produ very best, too. This very system, it among wine-makers and dealers, can near wrecking that husiness, and i very great extent, the cause of the depression in wine prices. Shall the men of this State allow the same ay: ruin their business, or shall we a change before any further harm is d

NEW ZEALAND SUGAR.

Consul Campbell, of Anckland, lengthy report on the sugar trade dustry in New Zealand, referring production of refined sugar in the says: "The materials for making are not grown in New Zealand, but ported, and aggar is made and refine A large quantity is used in beer, were about 9,000 tons refined here the year 1887. The sugar works Waitemeta Bay, near this place, turn large quantity of fine sugar, supply trade in the colony and exporting quantity to the islands of the Pacific quantity refined in the year 1887 fr raw materials imported was about tons. Import of raw sugar, 198,34 dred weight; refined sugar, 279,920; 6,634; molasses-treacle, 3,741. The is so triffing in quantity that it is worth stating."

A GOODLY VINE.

The Alhambra notes one of the wo growths of the vegetable, peculiar t fornia, is the grape vine at Bayly Gabriel Hotel. The vine is 4 inches in circumference, and some branches are 15 inches in circumferer 100 feet long. Fifty-five years ag Vallejo, a young man of 40 years under its shady branches, and could it but feel the gratitude exprethe tired tourist as he partakes of h under its lovely arbors, it would

ST OF PLANTING AN ORCHARD.

One of the most frequent questions asked correspondents living in the Eastern hard. There have been various attrupts answer, but they have been defective, ing to local causes. The following, prered by Leonard Contes, of Napa, a wellown nurseryman, may be taken as a hard:

e contract price in Central California for preparing an orchard of deciduous is about \$5 per acre. The average cost of trees is \$15 per 100, and the average num-ber to the acre 110 ber to the acre 110\$24 00 Wivating and hoeing the same 4.00 year

e total cost up to the time the orchard is 1 year old (exclusive of price of land, which can be bought at from \$20 to \$150 per

The second year the cost will be wing twice \$1.00 Itivating eight times 6.00 uning and hosing..... raying planting missing trees..... 2.50 a total of......\$14 00

The third year one plowing will suffice, ich will reduce the expense by \$2 per re; the other items will be about the me, except the replanting which will ve to be done. This year from a peach shard a little fruit will be marketed, and following year a crop worth \$50 to \$75 r acre. Apricots, almonds and nectars will also bear the Courth year, and me varieties of plams. The fifth year ones, apples and pears will begin to bear, dafter that the orchard will be started, ples and pears being in their prime at or twelve years, and most other fruits from five to seven years. After the third ar the expense per acre will vary from 2 to \$20, according to the amount of raying snd pruning to be done. I always vocate more or less sammer printing in and orchards, which can be done at odd mes and will much lessen the winter exnses.

In full bearing, at 150 pounds of fruit r tree, or (following the above estimate) 47 50 per acre gross, at 11; cents per and, a net income of \$135 per acre will reatized, allowing for all expenses of irketing the fruit, but exclusive of the terest on the investment. Of course, ininces are common when the profits have en doubled and even quadrupled; but vobject is to place before business men ures on which they may place their callations.

CALIFORNIA RAISINS.

A correspondent of the Boston Herald, iting from some point in New Mexico, is anxious to make a point in favor of that rntory that he, unintentionally or otherse, does a gross injustice to California. pearing in so prominent a paper as the rald, its ments notice, which would not the case otherwise. The correspondent ferred to says:

"The culture of the raisin grape is a ost profitable industry. The demand is great that the acreage is increasing gely in California, and New Mexico has its climate a factor that makes it superior

the Southern Pacific Company carries the grapes for the growers free of charge to the Mohave desert to be dried in the suitable ites is the cost involved in setting out an | air of that arid region. The atmosphere of New Mexico is, however, so dry that the raisins can be cured on the spot where grown, at the minimum of trouble and cost. We may, therefore, look to see a great development of raisin culture here. de in estimating the cost of a bearing So great have the resources of the M silla region of the Rio Grande Valley proventhat a great demand for land has sprung up there, and sales of favorably lecated property have been made as buch as \$125 an acre, a price that seems high for New Mexico, but which would be extremely low for like land in California."

> Doubtless this will cause the raisin growers of this State to smile at the ignorance or worse which could make statements so divergent from the truth as those quoted. The growers and packers of the million or so of boxes of rusins produced in San Bernardino, San Diego, Fresno and other countries, will learn with surprise that the atmosphere in those localities is so humadas to prevent the proper enring of raisins, To be sure, this alleged fact had hitherto escand them. In their dense ignorance they have gone on for years drying their grapes in the open air in the vineyard where they grew and converting the fruit into raisins that are freely acknowledged to be the equal of the imported, and as near perfection as a raisin can be. But now all this is changed. To their surprise and grief th y now learn that this has all been wrong, and that it is useless longer to keep on in the same pathway. They must now either send their grap s to the Mohave desert to be dried, or also all emigrate to New Mexico and begin over again,

But seriously, what is the use of trying to tear down one section in the hope of building another, as is here done. It is true that some years since the owner of a Museat vineyard, in a locality so near the coast as to be within the fog line, found himself. one year unable to cure his raisins in the open air, and so shipped a carload or two to the disert to have them dried there. But the experiment was a failure. His experience was simply an additional proof of the fact that the raisin grower, the orange grower and the cultivator of any kind of fruit that requires to be dried in the orein air, should locate as far away from the coast as possible. Ninety-nine hundredths of the raisin vineyards in California are so located, and it is not probable that a single box of the million and a half now being packed will be dried anywhere, but, in the same vineyard where the grapes were pro-

There is another error in the quotation given which should be corrected, and that is in regard to the price of land adapted to misin culture. It is stated that \$125 an acre would be considered extremely low in California for such land. There are thous ands of acres of land in Fresho Mercod Tulare and other central counties which are adapted to the cultivation of the Muscat grape, and for which \$125 an acrwould be considered a very high price, instead of a low one. Indeed, good graps land may be purchased in those countres for as low as \$100 an acre. Further south

getting the grapes to cure properly, that vineyards not over six years old from \$150 Marysyille, wrote to Mr. Marshall, desiring to \$200 an acre annually, these pieces are unformation with regard to time of plantnot at all out of the way, but on the contrary may well be considered as low, Fx

- -LAND TOO RICH FOR TRUIT.

A correspondence the Rocal Press says The general impression seems to be that land cannot be too rich for fruit. Theoretically it cannot, but practically I am convinced it can be. Most writers of horticultural subjects say that any land that will raise good corn will be good for fruit. 1 never saw any land too rich for corn, but I have seen it too rich for fruit. Land may contain so much humus or plant food that a large growth of wood will be made and , but a small quantity of fruit be produced, just as land may contain so much plant food as to grow heavy straw, but yield little or no gram. There are two orchards of about 1000 trees each near Sahnas, Monterey county, that show clearly that land may her too uch for fruit. The trees in these orchards are young and have made a remarkable growth of wood. Many of them had such large, dense tops that the wind had swayed them over, and it became necessary to give them a somewhat severe pruning last winter, having been neglected in this respect for some time. No plowing was done in one of these orchards, the ground being merely cultivated, and no cropwas idented. The other orchard was plowed very shallow, and not very near the trees, and some corn, beans and pumpkins planted. On visiting these orchards recently. I was amazed to see the wond-rful growth of wood the trees had made and the small amount of fruit there was. From the number of fruit buds left at the time of pruning, there should have been all the fruit the trees ought to carry, but in neither orchard will there be 100 boxes of frmt, whereas there should be 1000. Now, the trees having made such a remarkable growth of wood at top, must, of course, have remarkably vigorous and wide-sproading roots. As the roots were not pruned nor broken any by the plow as they should have been, all their strength was left to renew the branches out off at the time of pruning, and most faithfully have they used this vitality to grow enormous tops to up to one's hips, is another evidence of the superabundance of plant food in the soil. H re in the footbills, where there is less humis and more mineral substances in the soil, our trees are loaded down with fruit. ven to breaking down of many limbs.

Evidently the remedy in such cases is t root-prune, by plowing as well as to topfruning, exhausting the excess of humis by cropping the ground with some root or vine crop, and by a liberal application of the reason of the failure of the orchard to kuew in Yolo county was the same as mentioned above.

WILD BERRILS FOR PROFIT

Colusa, in planting wild strawberries on his premises has been widely copied in diff rout pap is of this State, and it is exeiting the price is higher, though the best raisin the carrosity of horticulturists in general land, close to the railroads and towns, may His ideas in this connection, remarks the California for that purpose. In Cali- be had for \$150 to \$200 an acre. And Domestat, are likely to foreshadow a moverais the air is so humid in the vineyard when, as is actually the case at present, ment that will prove of great benefit to gions, and there is so much difficulty in raisin crops are netting their owners from fruit-growers. A gentleman, who lives in estimated at \$200,000 to \$250,000,

ing, mode of cultivation, etc., all of which Mr. Marshall kindly answered. He proposes to try wild rasplerries in xt season, It is a well settled fact that our native raspeberries, strawberries, and blackberries are of far better flavor than the imported tame berries of the same name, and know ing this to be a fact. it is very strange that people have not endeavored to propagate them extusively. The writer is familiar with the growing places of all the above. named berness. About fifty miles west of Willows, on the coast tangs in ountains, is s wild rasple rry patch of about fifty or sixty acres. These bushes can also be obtained from Snow Mountain On the summit of any one of our large mountains can be found the wild strawberry. As it is a question whether they can be grown in the valley, it would be well for some person to try their adaptability to valley soil. The wild blackberry grows in abundance along rivers and water courses of our State, and would probably thrive well on the plains it proporly cultivated and irrigated. The worthberry (or buckleberry) is very plentiful along the coast near Mendseine City. They have been tested in the valley, but the experimenters have come to the conclusion that they require the fogs and sea breezes to make them grow and mature properly. In the same locality can be found the highbush cranb rry, a very delicious, transparent fruit, but in other respects resembles the ordinary swamp crimb rry - We would advise our orchardists, to plant these trees very extensively, as thay grow to a good height and resemble the olive tree. The wild gooseb rry, plum, cherry and hazel nut are also found along the coast and should be tried. The wild grape will grow prolifically in the valley lands, and can be trained to make a fine arbor. This grape makes a very fine, wine, and an excellent jelly. Mr. Marshall proposes to obtain a large number of dewherry vines from Ohio this fall and experiment with them,

A DESTRUCTIVE BUG

And now an eterny of the olive his been found, says the Labore Register, a hardshell bug which bores into the heart of the tric to sap its vitality. There are some the trees. Then the rank growth of weeds, mighty quor circumstances in this world of ours. Fow a weed of any plant not used which we call a weed for want of a lotter term, will grow by a dusty highway, on a vacant lot or over back of the stable So long as it is let alone it will florrish without water, without air, and wax fat on adversconditions alone. So will a tree which produces some little, sour, puckery fruit of no use to man or beast. But just let some ambitious mortal undertake to cultivate that sort of v.g. tation, and what do we see? him and ashes. I am confident now that Why, bugs bore it, thes string it, worms gnaw it, baids peck it, winds twist it, produce fruit on another ranch which I droughts search it, and all kinds of aboutmable lock drop down upon it is a bunch, It is a constant source of trouble and vexation of spirit. The only way to get rid of a permicious plant is to cultivate it, and the only way to encourage some plants is to The new scheme of Mr. C. Marshall, of judgethem up and fire them over the fence There is probably not a man alive who would not jump at the chance to take a look through the machinery of old nature just to learn why she is made as she is,

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Registration for the General Election

All electors desiring to vote at the General Election to be held Novemb r 6, 1888 must be registered regardless of any previous

registration.

R gistration for the General Election to be held November 6, 1888, will commence at the Office of the Register of Voters, in the basement of the New City Hall, on WEDNESDAY, August 8, 1888, and will continue until MONDAY, October 15, 1888, inclusive. Office hours from 9 o'clock A.M. to 5 o'clock P.M.

The registration of voters in the precincts will be held from October 16th to 20th in-clusive. By order of the Board of Election Commissioners. BEN. A. PRINDLE,

Commissioners.
August 4, 1888. Regi-Irar,

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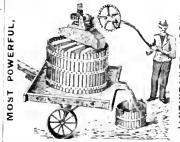
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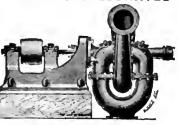
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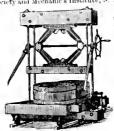
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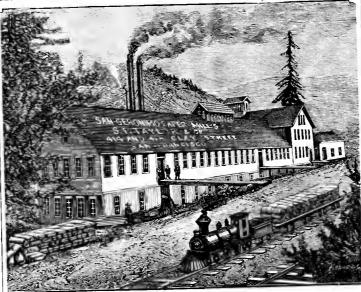
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INSECT-KILLING FUNGI.

VEGETABLE PARASILES THE CAUSE OF DISEASES ATTACKING MAN AND ANDRUS.

An Interesting Description of these Microscopie Luogi in a Hulletin Issued by Experimental Station of Minnesota

It is now a way known fact, that quite a large number of discuss a attacking plants, numuals and man are produced by very lowly organized plants. These vigetable parasites nearly all belong to the cryptogamous or floweriess plants, and are most usually called interoscopic fungi. Finigi infesting plants were well-known since time immorial, but no one supposed them to be the cause of a disease, they were considered simply as the products of peculiar abnormal conditions of the parts of a plant upon which they were found growing. Only quite recently the investigations of Tulasne, de Bary, Kuchn and other studenes of microscopic organisms proved beyond any doubt, that ail such vegetable pasasites were produced like every other plantfrom seeds or spores, and that their growth in or upon other plants produced a diseased. condition of its host, and eventually its death. The most indubitable proofs for such a statement consisted in artificially infecting a healthy plant with germs of the parasites taken from a diseased one, and by thus producing to due time the same disease. Luithermore, the actions of many of these vegetable parasites have been followed step by step with the inneroscope: The germination of the spore upon the intested plant, its cuttable into that plant, the formation and growth of mycohate and lab r of the spor-s were aid crossly observed, and thus the course of the disease was made quite plain.

It would take up too much space to even

His exoublit papers for study could be either d without much natters, as being both instructive and of conomic importance. As familiar instanc's of fings producing diseas. I mention. Ulights, rusts, mild w. smits, etc.

A disease in plants or animals, produced by fungi usually takes the following course: The spores ponetrating to the interior of their host, and their rapidly growing and multiplying, so at take distute gration of the attacked healthy organs, and eventually ither a slow or a sud ien death. It is not by any means always easy to prove, that the presence of fungi is the cause or the eff et of a disease, but in quite a large numfor of cases-aside from the discusses in plants produced by them-we know positively that they are the cause, and not the ff. ct.

As an illustration of the fact that invisibly small plants are able to occasion either immense losses or great good, I simply mension the various and better known contagious diseases which kill our domesti. cated animals. It is not alone well-known, but can also be demonstrated, that the Rinderpest, Texas Fever, Pleuro-pneumonis, Cholera, Fowl Cholera and numerous other hiseases are each caused by a different species of bacterium. Broadly speaking or nearly--if not all--contagious diseases are due to the rapid multiplication of such small plants in the one or the other organ or organs of the affected animal. Nor is man himself exempt from their inroads, as Cholera, Yellow Fever, Searlet Fever, Small Pox and a host of other diseases too plainly prove.

The same assertion can be made in regard of insects killed by contagious diseases, and such diseases are by no means as isolated and rare as most people seem to think. If we examine carefully dead blayes and moss, principally in wet places of after mention the name rous parastic tungi which over an old piece of decaying board quite which produced liseas. If this should ever several families of cryptogamous plants, fastered to it, and all plantly show the bloods that r and spreated entanology Scribner, in the reports of the Department like process growing through the soft into Tpeer's where their presence is oney susof Agriculture in Washington, has during grim at between their heads and thorax IIP the last three years described and illustrated | During the past summer diseases of sinner (expaily to the

chould be read by these interested in such trouble. Certain plant-life, frequently found upon clover, could be seen in vast numbers upon the leaves of that plant, do id and surrounded and imbedded by spores. In fact I found it rather difficult to mature certain cat rpallars in confinement, and had to shift the position of my breeding bexes quite frequently to insure success. Various eat millars, charly those of our goody diarnal built ribes, all dod from the iff ets of a discuss produced by a fungus, and patches of their food plants were draped with their black and putrid bodies. Chinch lings suff r grately by one of these diseases, as will be mentioned later. Even the common Two-strips d Locust Caloptonis bivillates , usu lly a rather tough insect and proof against the usual ailments of insects, were killed in numbers by a vegetable disease. The specimen here referred to showed no outward indications of any discase, and as no spores were visible, it had the apperance of having been killed by a parasitic insect, by a Tachina tly. But closer investigation showed no evident trace of such being the case; on the contrary, the whole inside of the dead locust Charbon, Black Quarter Tuberculosis, Hog | was filled with a white, powdery material, composed of inycental threads, and strongly smelling like some of our common toadstools.

It is not my intention to minutely describe the numerous species of fungi that kill insects, but simply to mention and illustrate a few of the incre important ones, to give the reader an idea of these lowly organized plants. Some of the illustrations were borrowed from the "L hibuch der Mitteluropaischen Forstinsekten-kunde? by Drs. Judich and Nesche. Some of these fungi occasion gold losses to the silk growers and bee raisers, others are of great value in assisting us to combat our reputions insects Futur investigations and careful experiments may strigger us the means to proa ranny season in summer or autumn, we will duce such less as sas will, and at a time surely find large numbers of insects killed, when their assistance is most needed. I by various species of fungi. In turning (refer to the authoral culture of the fungi produce disease in plants. They belong to frequently numerous deal ants can be seen by me possible and there is but little and consequently are quite different in cause of their death by being surrounded will have a new and most important assisttheir respective actions. Prot. F. Lamson anth myedium threads, or by having a horn that in fighting move is invests, even in

To foinge which kot insicts beeing prina number of them, but cheefly those affect- characters were quite common, and material competes and Entomorphib real

SCHIZOMYCETES OR BACTERIA.

These fungi are exceedingly small organs, each consisting of a single cell. They multiply by self-division. The cells are of various shapes, some are globular, others oval, elliptical or cylindrical, they occur either singly, in pairs, or united in either threadlike or chain-like masses. Some are without any motion, others more by means of whip-like organs, more or I ss rapidly, but even these latter enter stages in which no motion is visible. In this case they are imbed dd in a j llv-like material.

Large numbers of insects are killed by the various species of fungi composing this order, but only two of them have been studied more thoroughly,

The flavoidity flacherie, maladie des morts, blanes, schlaffsucht) is produced by Micrococcus bombyers Cohn. This disease is in some years so prevailing in some countries that it prevents a successful silkculture. An excellent article prepared by Prof. C. V. Riley on this and other dis ases attacking the silkworms can be found in Bulletin No. 7 of the U. S. Agricultural Department, which forms a "Manual of Instructions in Silk Culture." This disease was quite common this summer, attacking the cat-rpillars of our most common and beautiful butterflies. Pyrameis atalauta, Pyrameis cardui, Vanessa antiopa and Vanessa grapta were killed in vast numhers, both near the Experiment Station and in Otter Tail county. A few spores, introduced into a caterpillar either with food contiminated by a diseased one, or from the outside, multiply with great rapplity, and soon distrib grate the blood and tissues, thus causing decay and death. As this disease is very contagious, the caterpillars if above insects, which are to some extent gregarines, as their fee Eplants Nettles, hops, etc., are quite local and usually grow in patches, soon all die in any given locality, N we omers, produced from healthy eggs had by butterflus attracted from a distance to these inviting stores of food, also soon become discussed, probably from spores left upon the blaves by the former victimis.

The "Taulbrood" of our honey bears allo probled by a summer plant, the Buchus mehtophtherus or alver. Ima dis asc is well-known in to my regions, and frequently threatens to put for the time a stop to any farth r 22 mpts in rusing bees,

The "Pebrine," another becase of the

silk-worm, is also produced by low organ- infection; they become quiet, slow in their apore is lodged upon some unsuitable subisms, but at present their position in a botanical sense is not quite certain. Balbiani even considers the parasites producing Pebrine as animals belonging to a group called Sporozoa. In fact it is by no means quite certain that all the fungi mentioned thus far really belong to diff-rent species and genera; some naturalists claim them to eyelus of growth.

These fungi are distinguished by an elongated spadix-shaped fruit-bearer, in which Asci or spores are formed in peculiar little bottle-like cavities. But besides the spores formed upon such fruit-bearers others can be formed directly upon the surface of the mycelium, or by sp cial hyphæ.

The best studied species in this order of fungi is Cordyceps militaris Fries. (Torrubia militaris, in honor of a Spanish monk who first discovered such peculiar parisitie growths upon some wasps in the West Indiea.) A good description by Prof. C. V. Riley, with illustrations, can be found in the "American Entomologist," Vol. III. The larvæ of our May beetles, well known by the popular name of White Grubs, are quite often attacked by this fungus, and when found always attract the attention of the curious. The inflorescence generally presents the appearance of a pair of elongate horns, one issning from each side of the head. These two borns-sometimes there are four-are usually of different lengths. and grow to the length of three to flive inches. Other larvæ are also affected in a similar manner, for instance, those of onr Stag-beetles, of the Seventeen-years Cicada, and others.

A peculiar form, but belonging to the cyclus, of growth of the Cordyceps, is found npon various caterpillars and prepa; it is Isaria farinosa Fries. This fungus is quite common, and as seen in this figure, is distinguished by its peculiar and numerous stromata or fruit-bearers.

Botrytis Bassiana Balsamo is another fungus that belongs to this order. It prodoced at one time the well known disease of the silkworm, usually called the Muscardine, but is now rarely met with, appearing only in very wet seasons. As soon as one of the spores of this fungus lodges upon the skin of a caterpillar, it commences to germinate, and penetrates through the skin, and once inside, ramifies in all directions. The point of entrance is usually indicated by a discolored spot. The affected caterpillars usually die in the course of twelve to fourteen days, looking soft and shruoken. Soon after, however, the corpse commences to swell up again, owing to the increasing pressure of the growing mycelium from within, until the extended skin is ruptured; in dry weather the caterpillar shrinks up into a mnmmy.

Thesa fungi, which produce epidemic diseases only among insects, belong to the group of Phycomycetes, whose systematic position is not quite certain. It is a small family, only parasitic upon insects, and contains the two genera Entomophthora and Empusa, which are mainly distinguished by the former having branching mycelial threads, while in the latter they are formed by one-celled threads.

The most thoroughly studied species in Europe is Entemophthora radicans Bref., which produces quite frequently an epidemic disease upon the larve of the cabbage but, terfly. It occurs in this country as well. The usually lively caterpillars of this noxi.

motions, die suddenly, and are soon entirely enshrouded by a greenish-white fungus, the infloresence of which lasts but a few hours, leaving nothing of the caterpillar as a brown shrunken skin, surrounded by large masses of white spores. The fungus does not increase in the body of its host by self-division (like yeast plants), but forms a manybe simply members of one and the same jointed mycelium, which eventually fills the whole interior of the affected caterpillar. According to quite recent investigations this fungus forms also resting spores, which are said to be produced by the copulation of two mycelial branches Another species is Entomophthora aulicæ Reichard, which in Europe has been quite often of mant for threa and more years before they great service in checking the devastating armies of certain caterpillars.

> One of the most frequently observed diseases produced by fungi is the "Fly Cholera," produced by Empusa musce, Cohn. This disease can here be observed every year, from the middle of September to the beginning of winter, but in more southern regions it is found throughout the year. The first stages of it are indicated by the restlessness of the attacked flies; they soon, however, become week and slow in their motions. Having securely fastened themselves with their broad tongues to the object npon which they happened to be when attacked by the last stages of the disease, a succession of spasmotic tremors pass through their wings and legs, and the tormentor and destroyer of our slamber is no more. The abdomen of the victim of this disease, previously already swollen, becomes more and more distended, and a fatty, whitish substance pushes through the softer membranes between the rings or segments. Soon after a whitish halo of spores is formed around the dead body, readily seen if the fly happens to have fastened to the glass of window or mirror. These spores gradually cover the whole insect with a white dust, and they appear in ever increasing numbers as the body of the victim dries up, until at last its whole interior is empty and only a shell remains. In the earlier stages of the disease, and before it can be recognized by any outward signs, its presence can be detected by the milky condition of the blood, produced by very numerous, roundish and floating cells of fungi. These cells grow into elongated, contorted and cylindrical bodies always composed of a single cell, which, after the death of the victim, push their cone-shaped heads through the thin skin between the chitinous abdominal rings, and produce outside the fatty, white dust already mentioned. At all the exposed ends of these elongated cells appear in due time globular spore, which gradually assume the form of bells; they are, by constriction, at last separated and thrown forcibly into space, from the halo surrounding the dead insect. Each of the ejected spores is surrounded by a small mass of protoplasm torn away from the cell; this latter collapses after baving ejected a spore, and a new one is gradually formed in its place, also to be ejected in due time. If such an ejected spore lodges upon a healthy fly, it is held in place by the sticky protoplasm, and if it should have been glued upon a soft part of the insect, for in stance upon the underside of its abdomen, it will commence at once to grow and penetrates through the skin of its new victim. Once inside the spore rapidly increases by self-division in the manner of yeast-cells, and soon afterwards produces again sick-

stance, it is able, on account of the drops of protoplasm surrounding it, to produce upon its end a secondary spore, which is again forcibly thrown into space. Such secondary spores are very apt to come in contact with the underside of flies running over them. Diseased flies, dying in wet places, produce no bell-shaped spores, but simply globular, colorless and thick-skinned ones, rich in fat, which are the resting or dormant spores. Such resting or dormant spores are not easily destroyed by unfavorable conditions, and can bridge over from one season to another, and some resting-spores have been known to be dorstarted a new cyclos of growth. Such spores, at least those of the Empusa, are produced without copulation; there are, however, some species of Entomophthora, whose resting-spores are produced by copulation.

THE CHINCH-BUD AND ITS DISEASE. During the last three years Chinch-bugs have occasioned immense damages to the various creals in this State, but chiefly so in the more southern countries. They have been steadily on the increase and were rapidly spreading in a northerly and westerly direction. This increase was entirely due to the very favorably atmospheric conditions prevailing throughout the summers of 1885, 1886, and 1887, which were very dry and warm, and jost suitable to these bugs, which are essentially dry and warm, insects. Owing to a wet, cold, and very backward spring in 1888 they were not in a very healthy condition when warm weather commenced, and large numbers were killed in their wintering quarters. Here at the Experiment Station all the Chinch-bugs hibernating in the fields, where they had been exceedingly numerous and injurous in 1887, were found npon close examination to be dead. Their bodies could be found in all suitable wintering quarters, and frequently hundreds were huddled together. But upon the slopes of the hills, covered with oaks, bounding and protecting the beautiful station on the north, the conditions were quite different, and in favor of the Chinchbugs. The copious rains of the spring could not lodge there for any length of time, and the sun would soon dry the drenched bugs on these sunny hillsides. Consequently large numbers wintered their in safety, and formed a center of distribution for our experimental plots. A 40-acre field of oats. in very close proximity to these hills, formed the nearest point of attack for the hungry bugs, and as soon as warm weather com. menced they migrated to this land of plenty. They invaded, however, only the outer edge of this field, and lodged upon the still quite small plants, which soon paled under this infliction. Prof. Porter and myself had just concluded to give our enemy a warm reception, even upon a field not belonging to the station, as a sudden change in the weather kindly assisted us, and removed the threatening danger by means of three very cold and wet days. After this no bugs could be found in this field, and all danger was thought to be over. Real warm weather now became the rule, and the slumbering vegetation, as by magic, became a blooming reality; so became the Chinchbugs! The gentle southern wind was loaded with them, and they landed in immense numbers, everywhere, to begin their destructive work in our fields. The warm weather continued, and the first generation ous batterfly soon show the effects of an ness und death. If, however, the ejected of Chinch-bugs became quite numerous and

destructive, and the second brood three ened a repetition of last year's disast Oats, rye, and some grass were utterly stroyed by them, and the young and pro ising corn formed now a standing invitat to the hungry hordes. To prevent the iuroads, all the infested fields and expe mental plots were surrounded by a board fence, six inches high, and snn fitting to the ground so as to prevent insects from crossing under this fence. upper edge of the boards were painted fr time to time with tar, which prevented bugs from crossing. The insects were this time of all sizes and ages; adults of first brood, eggs, young hatched bugs, n pupse of the second brood were all mix together, and all were decidely hungry, their intense activity and the swarmi armies of famishing bugs plainly indicate To gather in this crop of bugs, round hol about six inches in diameter, were drill in the ground close to the fence, and as o hole became filled with insects, it w closed and another one was opene close by for the reception of more victin So matters worked to our satisfaction, wh an unexpected assistant came to help a making the structure of more fencea u necessary.

The above mentioned holes were qui deep, and consequently were always wet, condition of things not at all suitable starving to Chinch-bugs, and they soon b came unhealthy and weak, thus presenting the best conditions for any disease to clai them as its victims. And such a diseas produced by a fungus, was not slow : making its appearance, as could be seen b the numerons dead bugs. The margins all the holes, but chiefly those more densel crowded with captives, soon became whi ened with head bogs enshronded in whi mycelial threads and dust-like spores, i fact in a few days the upper rims of thes holes looked as if recently white-washed Nor did the disease stop there! On the cor tray it spread very rapidly to adjoinin fields of timothy, Hungarian grass, miller etc. Even the course followed by it from the holes could be readily recognized fo some time by the more or less numerou white spots left in its wake. The fields in vaded by the disease afforded, upon close examination, a truly edifying spectacle to those not interested in the welfare of the Chinch-bugs. They looked quite panic stricken, and moved about in a slow and dazed way, figuratively spenking, as i badly seared. And well they might be! The victims of the disease could be seen every. where by the thousands; they had been slaughtered in all kinds of positions, but they were usually fastened to the blades and stems of the grass, or to the leaves of young clover. All showed plainly that their last and strong determination in life had been to hold on as long as possible; their legs were firmly planted upon the substance where the bug happened to be; others had only their beaks inserted, and were dangling by it free in the sir. But all showed the characteristic white mycelium threads and spores of the disease. Although almost exclusively attacking Chinch-buga, the disease was not very slow in also slaughtering such small flies, as found tha society of such malodorous companions to their taste. A story with a moral! Not having had access to Prof. S. A. Forbes articles on the disease of the Chinch-bug, I am unable to to say whether Micrococcus insectorum Borrill has anything in common with the friendly fungus causing all this slaughter, but I hardly think so, as the

disease observed here has no similarity to the flaceidity of caterpillars, but appears to belong to a true species of Entomophthora. These interested in contagions discases of insects should read his excellent paper published as Article IV of the Balle tin of the Illinois State Natural History. Vol. II

Most, if not all, the Chinch-bugs would have been killed at the Experiment Station, of the suitable conditions for this discushad lasted a few days longer. But the wit spell prevailing part of the time, the disease was playing such havor amongst the bugs soon passed and was followed by warn. and very dry days, which soon stopped any furth-riner ase and spread of the discase But by artificially producing such conditions the lisease was kept at work for some time, but a bly on a very limited scale. Nor could it be spread, because in mature such artificial conditions could neither be produced nor manutain I on any extensive scale.

As many parts of the southern pertion of this S. down overrin with Chinch bugs. I thought that a good opportunity and as inviting this was present duto purposely spread a dis ass - in act not usually considered a very kind one to engage in, and one not to be recommended to physician-This was exceedingly simple, as all that was n cessary was to gather a number of the diseased bods, put them into tight fitting tin box's, and mult hem to regions infested by Chanabaga, Arrived at their destination, the contents of the boxes could simply be thrown in any field known to be infested with such bigs. This was done with specimens of the diseased bugs collected at the Experiment Station, and eighteen different places in southern Minnesota were thus made country of distribution for this dis ase. And as it seems with remarkable good results, as the disease has killed off the bugs to such an extent, that careful search in a majority of places failed to produce a single living specimen, whilst the traces of the disease was found every-

The disease spread so rapidly, that even corn growing mear wheat fields crowded with Chinch-bags were entirely protected. and no bugs had entered them in all the places visite I by myself. But I am by no means satisfied, that the disease was really introduced in this manner. Is it possible that the dis ase was there already, nuknown to any one, and that I simply re-introduced its germs! The reason for this belief is based upon the fact, that too large an area. was infested by the disease, to large to be readily accounted for by the short time in which the atmosphere conditions were- apparently-in its fav r. But this may be as it is, one thing is certain, viz. the disease has been there, and consequently the spores; of the fungus producing it are there also, and remain there, to act whenever the conditions are favorable, and I nearly belowthat our farmers need not entertain any fears of Chinch-bugs for the near futur-

For lack of space the continuation of the article on the Booky M untain Locust in Ofter Tail County, "as well as an article. on the army worm, has been omitted. They will be publised in the next base tim.

The largest known flower is the rafflesia. an extraordinary parasite of the forest trees of bamatra which measures three feet in diam ter, weighs fifteen pounds and has a cally holding six quarts. The plant consists only of the dower, growing directly on the stem or body of the trees.

THE FORESTS OF THE UNITED

The Philadelphia Times summarizes the annual report of the Division of Forestry if the United States Dapartment of Agrialture, which estimates the forest lands in the States and Territories as follows.

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A study of these figures shows that the South is much richer in foreststhan any ther portion of the country. S parating the States into groups, the six New England States are credited with a forest aera of 10.-193,028 acres, the four Middle States with 17,630,000, the fourteen Southern States including Maryland and leaving out Missouri, with 232,800,000, the nine Western States with \$0,358,767, the four Pacific States with 52,630,000, and the seven Territories with 63,034,000. It will thus be seen that of the entire 465,645,795 acres of forest included in this estimate the fourteen Southern States possess fully one-half,

These statistics show that while the process of depudation has been carried to an nuhealthy extreme in the Eastern, Middle and a few of the Western States, the forest area still remaining in this country is a magnificent one. If the estimates of the department are approximately corrrect, the timber lands of the country, exclusive of Alaska, cover an era equal to fifteen States the size of Pennsylvania. If proper measures are taken to prevent the rapid and unnecessary destruction of what is left of our forest domain, it should be equal to all requirements for an idefinite period. It is not yet a case of locking the stable after the horse is stolen, and should never be allowed to become so. With the adoption of a policy of pulicious tree planting in the Pacific States and a system of State or Government reservations in the mountainous districts, which are the sources of the chi-f rivers of the country, the evil off cts which have followed forest denudation in Europe and some portions of Asia would never exist here. Bradstreet's,

Mt. a of the so-called ivery new in use is simple potate. A good, sound potato wash, ed in diluted sulphuric acid, then bealed in the same solution, and then slowly dired, is all ready to be turned into buttons, poker chips and innumerable other things that ivory was used for once upon a time.

ALLEGED ADELTERATION

Mr. F. W. Cosens, writing on this subject in B of res element, says. "An uncisual amount of exaggeration to put it mildly-has been current lately with refer nee to what is someationally terms do the clusteration of shorry." Now, what are the facts? The yield of the last vintage in Spain is stated to have totalled 510,294, so gill us of wine good, bad and italif firsht. Of this 152,123,700 have been ex partial, the Lalance being either consumed in the country, store I for future use or distilled into spirit. J roz and its surroundings yielded, roughly, 5/2 (0,000) gallons, the sherry district proper contributing about Postniri say, 2700,000 Caliz is the seals and terminus of the Mairid milway, which passes through S vill , Cordova and Li Mancha, all pr lucing lirge quintities of white wines by some called sherrythe resemblance, however, being comined mainly to the color of the fluid, and not its flavor. The important nod G rman alcohol int . Caliz last year is estimated at about ne milli n of gall no to figures of the quantity unsold so in available ; and, as it is carried into the interior, and even to Madrid and utilized in the manufacture of suiseed brandy every largely consumed throughout Spain at also has the reputation of entering very largely into the 'Cognac' of the Spanish capital. Bearing in mind that La Mancha and the south of spain produce some two hundred milli us d gailens of grape junce unutilly, spread ver such a surface the one million of Gorman spirit represent about half a gallon per cent, supposing--which is not the cas--that all of it is used for strengthening weak white wines consumed in the country. One of the leading sherry shippers of Jerez stated, in a circular issued to the trade a few months since, that he never used German spirit in his Bodega, and there is no reas in to believe that his numerous competitors do so to deteriorate their sherry, as the addition of German spirit manifestly cannot improve it. Since the railway system has been introduced into Spain, the home consumption of sherry wine has largely increased, and this development has had a marked effect for good on the merchandize traffic of the Cadiz and Madrid line. As a protection to the consumer, the Spanish Government has somewhat tardily introduced an Adulteration Act-far-reaching and effective if carned into practice, but which is a dead letter so far as the sherry shipper is concerned, as he is not in the habit of sporting his sherry by adult-ration to produce an inferior article; and, as no means, so far as I know, have been discovered by which bad wine can be made good, it is not likely to be a profitable experiment to make good sherry into bad shorry. Many are interested in discrediting sherry, but the consumption in the Unit d Kingdon, still totals a considerable percentage of the win-imports. the medium classes the sile is probably as an over-valuation, and if we estimate the large as ever, but common verts, as well as grape acronge of Lake Keuka at 10,000 the very disandle stry descriptions, do not find as ready a sale as formerly. The aver- acre, the amount is shown to be \$4 marginal age quality now shipp 1 from Jerez under or \$41,000,000 less than the grape land accredited brands was never better than at valuation of California, and y t we pride present, crinvoice latin remederate rates, ourselves in this K uka, Seneca and Can-If this course be persistently pursued, and again region, on being well up in the sherry will yet live down alothe calumny world on grape growing. But when we h aped upon it by ign rint and interested. I tractors.

Subscribe for the MERCHANT.

A TEN DOLLAR EVAPORATOR

A correspondent of Green's Fruit Grover, says. At a small expense I made a dryer which has done good work, as the samples of exaporated fruit I have here on exhibition will testify, said Mr. Arnold in the Michigan horticultural report. I had up a brick work of three sides, also it thirty inches square and three feet high, inside of which I placed an old isox stove, of large size, and on top of the brick work I set a bex 27x28 inches inside, and its utfive forthigh above the brick work, with a door in front, which, when open, would a limit to a sliding trays twenty-seven in the sequare. These trays are made of light bass wood frames and mosquito netting tacked on the under side f the frame, although they could be used either side up. The netting required replacing once during the seas in, and is now about used up. I would use galvanized wir- trays only,

In the evening my son or hired man would pare about a bush-1 of apples in an honr, one other person and myself would trim the ends, cut the apples half in two. and our two little girls, aged 7 and 2 years, would spread the fruit on the trays, and I would slide them into the dryer. In this way we usually filled the dryer in sixty or seventy minutes. We endeavored to have the temperature 150 degrees, and about 120 after the fruit was partly dried. We had a ventilator, 6x27 inches, near the top, which could be opened or closel as desired, but should always be kept open while in use.

At bedtime we filled the stove with large wood, closed it tight, and in warm, dry weather our apples would be nicely evaporated in the morning. Out of this little cheap dryer we have taken seven barrels of nice evaporated apples well dressed down, over two barrels of peaches, besides currants, etc. I should have said that this dryer being one inch longer from front to back than the trays, a lmitted of a space of one inch at the back of the first tray, and also at the front of the a cond, and so on alternately. I have found this better than a half inch space in front and back of each

CALIFORNIA BEATS THE WORLD.

The growth of grape growing in Califorma be ats the world. The Fr sident of the California State Board of Viticultural Commissioners estimates that there are now 150,000 agres planted to vines in California. valued at \$45,000,000, with improvements necessary to carry on the business of the value of \$2 (18 0,000), making a total of \$65,000,000 invested in viticulture. Previous to the creation of the State Board of Viticulture the total capital invested in the industry amount d to but \$14,000,000 This shows an increase of \$50,000,000 during the last eight years

This graps acreage is rated at \$300 per acre, which does get so in by any means young and old, and value it at \$400 per compare figures with Conformia, it touds to make us feel that ours is comparatively a small interest, and inspires humning instead of undue arregance and exaltation,

A TEMPERANCE CRUSADE.

A Plan Proposed to Spread the Gospel of the Vine.

J. H. Wheeler, Esq., Chief Executive Officer Vilicultural Commission of California.

DEAR SIE:- I have just read the enclosed article, which I elipped from the N. Y. of the 4th inst.,- President Wetmore of the California State Board of Viticulture says that the great obstacle to the sale of California wines in the Eastern States is the high price demanded by the retail dealers. "California wine," says. " sold by the barrel in New York is cheaper than milk. Yet the dealers demand a profit of from 100 to 500 per cent. on every gallon. It is this barrier we shall endeavor to break down. Instead of our wine remaining a table luxury, we shall make it as cheap or cheaper than tea or coffee. It is the duty of every hotel keeper to furnish wine without extra charge to his guests, as he does the latter beverages. He could do it just as cheaply, and it is just as wholesome. In the end he would make a greater profit."

It vividly, revives my contemplations on the same subject some time ago, which I placed in crude form on paper, expecting then to go to California, and have the pleas. ure of presenting to your houorable Board, my ideas, of how could be created a securely profitable commercial outlet for the gigantic wine production of your State. Our Country, is assuredly large enough field, for the consumption of all the wines, California can ever produce, and, at good profitable prices. The grand idea, it seems to me, is bow to make the demand for them, -i, e., to popularize them-to the exclusion of the prevailing call for foreign wines, strong liquors, and beer. Surely, in the struggle to accomplish this object, incomparable advantages are in favor of our Native Wines-in their purity, flavor, nutrition and wholesomeness.

My plan involves the creation of that popular demand by placing the wines, even to the smallest quantity, within easy purchasable accessibility of everybody, everywhere in the city, towns and villages, throughout our country, and in economy of cost, if possible, almost as cheap as lager beer. My financial misfortunes, have precluded the carrying out of my design of reaching Carifornia, in person, so, F respectfully enclose the Ms., of my plan referred to, hoping, sir, you may find some good in it.

Prior to the last 3 years, I have traveled extensively throughout our country, east of the Mississippi, and in Europe. I would be right glad, sir, could you find, for me, something to do, in the line of promoting the demand for the California Wines, in the Middle and Southern States.

I feel confident of the ability of rapidly working up to a good organized starting point the branch companies referred to after the establishment of the parent company there in California. By securing the interest of locally responsible business and professional men of influence in these branch companies, respectively, and it could be readily done, for the object is good to their communities, and without risks it would give them (the Companies) solidity, commend the wines locally, and not materially extend the liability of the Parent Com-

I would cheerfully undertake the business at whatever pay you might think best, and,

pany-my enrient necessary expenses, to be allowed in money.

It is known by reliable authority, in 1882 California produced 12,000,000 gallons of wine, the pure juice of the grape, viz., Claret, Port, Sherry, Hock, Angelica, Muscat, etc. These sold wholesale at 50 cents a gallon,

The annual increase on this wine production was expected to become so immense. that it gave rise among the producers, to the important question: Where and how is it all to find a market profitable to them, or, that will even pay for production?

The following is a plan to vastly augment the sale and consumption, now and prospectively, throughout the United States of all the California Wines, viz:

1. By the organization of a stock corporation at San Francisco, to contract, at the minimum market rates, with all the leading wine-producing grape-growers of the State, for their saleable stocks of wines. annually. This company to hold these wines for sale only to its branch compauies.

2. Then the organization, through this San Francisco Parent Company of branch stock companies, to be located in the leading cities of the union, as exclusive distributive wholesalers of said California wines, purchased only of said San Francisco Parent Co., -and to be sold at their lowest contingent prices, to families, hotels, restaurants, retailing beer and other saloons and consumers generally.

A statement and exhibit showing the great inducements offered to capitalists to invest in the stock of this San Francisco Parent Wine Company.

Also, the substantial inducements offered capitalists, throughout the country to invest in the stocks of its branch companies located in the leading cities of the United States, and, an explanation of this original plan to be adopted by said branch companies, to create and rapidly increase the demand, among the consumers of stimulants, all over our vast country, for these companies' California Wines.

The San Francisco Parent Wine Company's branch companies, are to be located in the large metropolitan cities, viz: New York City, Boston, Philadelphia, Baltimore, Buffalo, Pittsburg, Cleveland, Detroit, Chicago, St. Paul, Burlington, Quincy, Kansas City, St. Louis, Cincinnati, Nashville, Galveston, New Orleans, Mobile and Savannah.-20 cities.

THESE BRANCH WINE COMPANIES.

The plan for their mode of business, inducements for trade, and means to be adopted to create increased demand for their California wines,

The Parent Company at San Francisco, supply them their wines, at, say 10 cents. added to their cost there of 50 cents per gallon making 60 cents. (This is premising the cost per gallon at that in the California sales of 1882.) Then add cost of transportation, from San Francisco to destination, say per gallon 10 cents. Then add the branch-companies allowed profit of say, per gallon 30 cents. Thus, the branch companies selling price for their wines, per gallon is \$1.00 (When sold in wooded packages, kegs and bbls., their cost might be added to this.) When sold in bottles, (quarts) by the dozen in a case at 50 cents per bottle making per gallon \$2,00. A gallon of wine holds 60 average sized sherry wine glasses full, which at 5 cents per glass would give, \$3.00. Thus the retailer, aelling

per gallon, this about equals the profit investors, made on beer, sold by the glass in saloons.

Why, then, could not these branch wine companies adopt the beer brewer's plan in all our larger cities? They establish little beer saloous in almost all the thoroughfare strects, requiring their managers or conductors to give nominal security for the little property and stock advanced them to start with. These branch California wine, companies could do likewise, by establishing little California wine saloous (or cellars, as they are called in Europe,) as numerously in their respective districts, where said wine, drawn from the wood, could be sold by the wineglass for 5 cents; by the pint 25 cents; by the quart for 50 cents, or by the quart bottle for -- say, 60 cents. (1.) Now, it is asked here, Would not this practical mode of bringing our fine native California wines before all the American people, rapidly increase their consumption, and consequently, soon establish an immense and permanent demand for them, taking the place of the present and longcontinued great demand for much inferior, imported foreign wines? I say, It would, and should

Should it be found advisable these branch companies could legitimately extend still another powerful inducement to the purchasing of their California wines, and thereby very rapidly establish a great, universal and permanent demand for them as desired.

This would be, by said branch wine companies, severally, offering a premium of two shares of their stock to each purchaser of one hundred dollars' worth of their wines, but this premium to stop on the individuals' purchases reaching to one thousand dollars. This, it will be seen, makes that purchaser interested in that branch company to the extent of twenty shares of its stock, and has undoubtedly, by that time, established his and his friends' tastes for our native California wines, by thus becoming well acquainted with them. This is all-important to the end in view.

Now, I respectfully submit the following proposition and plan for the formation of the Stock Company at San Francisco. Its exclusive business object is to be-to deal in, by purchase and marketing, the already vast and great annually increasing grape products of that State. In all her varied kinds of good wines that are recognized as equal to the best in the world, and only require to be properly advanced before the people to be properly appreciated. They then would become the popular and healthy beverage for all, and, thereby, profitably marketed. In thus creating a demand for these wines throughout our country, it could be supplied by the means of these local Branch Companies referred to. They to be subordinate and mainly governed by the San Francisco Parent Co. These Branch Wine Companies-say, twenty in number-to be located in the larger cities of the United States, and so distributed as to allow each, as near as can be, an equally separate commercial territory. (2):

First-For consideration of the grapegrowing wine makers of California, to enable them to always find a ready and profitable home market for their wines.

Second-For consideration of the California capitalists, as well as for those of other States, in making the wine basiness a specialty by atock companies handling said wines, gigantic as it would be, extending take that in the stock of the parent com- it at 5 cents a wine glass makes a profit per over our whole country, and with such as-

gailon of \$2,00, or a 200 per cent, profit sured profitable returns as to readily secure

And at the same time, and worthy of farther consideration, that by the consummation of this business, in making easily accessible to the whole people throughout the States, good wines made of the pure juice of the grape at the lowest possible minimum price, it would become the very greatest auxiliary to the good cause of temperance it could possibly have.

THE PARENT STOCK COMPANY.

The organization of a Corporation, capitalized at, say, \$1,000,000, represented by one hundred thousand shares of \$10 each. Object: To especially contract with the wine-making grape-growers of said State. for all the varieties of their best wines, etc., viz: port, sberry, claret, bock, angelica, sweet muscat, etc., at their minimum market prices. The stock of these wines to be held for wholesaling only to this Parent Company's Branch Companies, located throughout the United States, and to be sold to them at prices that will be an increase on their cost of say, 10 cents per gallon, delivered there, at the Company's wins ware-house in San Francisco.

Branch companies as the distributive agencies to be located in the leading cities of the United States, These Stock Companies to be organized by the consent, direction, and semi-control of the head, or Parent Company, at San Francisco. They are respectively to be capitalized, say, at from \$300,-000 to \$500,000, according to expected prospective business. This Capital Stock also represented by shares of \$10 each. Object : They are to confine their business transactions to dealing solely in the product of the California grape, wines, etc., which they are to purchase exclusively of the San Francisco Parent Company. They are not to be retailers, but are to sell these wines by packages only, viz : barrels, kegs, and bottles in cases; and to families, hotels, and retailers in their respective districts; and at prices not to average over 30 cents profit per gallon on its total cost, including its transportation, etc.

In consideration of the San Francisco Parent Company extending to them all these business facilities and special privileges, which it is to grant them, and to no others in competition in their separate districts-which favors will be such as organizing and starting said Branch Wins Companies, by stocking and supplying them, at San Francisco, with said Parent Company's California wines, etc. at the increased price of only 10 cents per gallon on their original cost to said Parent Company in California, in consideration for all such said Branch Companies are to grant one-half of their Capital Stock respectively, and non-assess able, to said San Francisco Parent Company.

And these shares, of said Branch Companies, are to be distributed pro rata among the stock-holders of said San Francisco Parent Company, who are to receive, as owners thereof, the dividends thereon,

The San Francisco Parent Company and all its Branch Companies are to give every proper guarantee that no deleterious substance, or anything, shall be mixed in their wines while in their possession, when undergoing changes in packages. Nor shall any of said Companies continue to longer supply or sell to such of their purchasers, (retailers) when such doings are discovered.

The San Francisco Parent Company is to anpply to its Board of Managers a semi

business, and are to declare dividends, payable semi-annually. And all its Branch Companies, scatter d over the United States, are to do hkewise, to each of their Board of Directors, and to the Parent Company, but they are to be quarterly reports. and they are to settle with the San Francisco Parent Company every three months.

In answer to the probable question Why and how would an organization or organizations like these, and the carrying out of such an enterprise, in any way assist the good cause of temperance throughout the country? I answer. Become, in purwine thire is much mourishin at, while in ardent spirits, there is none. In good wines, the pure pare of the grape, its abun dant nourishing quarties forbalishes a toral excessive use, by its off of on the stourch. the want of the same qualities in spirits does not, but on the contrary rather in lank its excessive use, and in-viribly so, whom relaishing food is not easily attainable to satis ty the spirit-producing sourcess in the stomach. This accounts for the remarksble rarity of drank no sate be found in the great wine districts of Europe.

Now, as the human race Lave used stimalasts immemorially, and wid, in all probability, continue to- especially in this fastcompeting, drive the elage - red by which use, with care, it is often moder quisite to mental and boldly brath-it tal abstinence societies to the contrary notwithstandingtherefore would not this proposed organization and enterprise, in the grand facilities it would or ato, in empling the whole now-almost ev rywhere, g od wine, the pure juice of the grape, at remarkably low prices, within the reach of even those of most limited means. Would not the fulfillment of all this, verily, assist greatly the pre-eminently good caus of Temporance?

And, then, would not the consumption of our good native wines increase? And, in that proportion, would not the same of ardent spirits decrease? Invitably, Because good, pure wine, the juice of the grape, is Nature's beverage and stimulant; it is palitable, and pleasing to the taste, whereas, ardent spirits are not, but, on the contrary, at first, are nextons to the taste, and entirely acquired. I do believe that this enterprise would have, not only the hearty approval, but the combined influence and support of the whole gigantic temperance movement throughout the United States

Truly it would, at any rate, be a move in the right direction, for if the habit of buy as in the last, the crop of the locality. drinking spirits or strong liquor, cannot be stopped, then what is the next best possible. to be done? Why, check it i temper it by any good means, and lessen drunkenness, And that does seem an easy possibility by this mode in the substitution of jurwines, convenient in reach, and less in cost than and at spirits are new in every city town, and vidage.

Hoping your honorable board may find some ment in may plan, and that I may have the pleasure of hearing from you on the subject, at an early date, I have the honor, to be

Most respectfully. Y air chedient's rvant, J. S. Post. Stanford, to without, Oct. 5, 1888.

The Westinghouse Licetric Company has recently perfected an incondescent lampwhich is expected to burn from 2,000,000 to 3,000,000 hours without discoleration.

annual account-current balance sheet of its FRENCH COMMENTS ON OUR GRAPE INTERESTS.

A translation of an interesting article in Le Fijuro, of September 29th, entitled Vineyards of Cathfornia, taken from the R rat Press, is as follows:

Towards the end of the last century the Spani h missionaro's tried to cultivate the grape in the country north of M xice, which now belones to the United States. This at tempt succeeded marvelously upon the slopes of the Sterra Nevida, which are near to the sea. It is not known precisely what kind of vine the padres had brought from Europe. The research s made by American botanists to discover among the plants cultivited in the Old World the variety from which the viney rels of California sprang. have not developed any results. Has the climate exercised its influence or did the massionaries receive from Spain the seed I rived from an indefinite number of diff re ent kinds, and have they proceeded by allowing the seed to grow intermixed in order to save the expense of a plantation conducted in accordance with the rules of the art? This conjecture is probable enough, and it would explain how they have been dde to produce a cross so multiplied that eventually there resulted a type almost uniform. Whatever may be its origin, this type exists, and it produces wine of a very bad quality.

Nearly all the vineyards bordering the Pacific were planted from the Mission grape. It is only within the last few years that the State of California has attempted people to easily find-as they do lag-r-beer to acclimate varieties coming directly from Europe. Private parties have taken advantage of the public supplies, and to-day there is no plant of the scarcest variety that cannot be found in the vineyards recently laid out in the vicinity of San Francisco. In truth, the prices have advanced so much, that a certain number of vineyardists are frightened by the expense and still have recourse to the Mission grape, which has the incontestable advantage of being acclimated for over a century, and of being sold very cheap.

Moreover, the operators who are willing to employ only European plants, do not appe it to have found a return for this enormous increase of expenses. They have sold the products of their vineyards at a little higher price, but have not succeeded in creating a grand California production, so classed upon the markets of the United States. The merchants of San Francisco have not given up their old habits; they and then they mix the whole to produce a French wine, as the multicolored vignette asted on the bottle attests.

One day, a proprietor in the vicinity of Santa Cruz was in the largest hotel in one of the large towns on the Pacific Coast. On sitting down at the table, he called for a bottle of California wine. The landlord. bridging up, said to him that he kept only French wines, and served him with a bottle of Chap au Latour. Such, at least, was the name written on the label, the paste of which had not had time to dry. The landlords of the Now World have always at hand a collection of viguettes, which they stick on at the proper moment, in order mover to be taken unawares by the notions of their customers. The sincerity of the cork left mething more to be desired at | neck of a bottle of Cognac,

of Santa Cruz are sold under the label of yardist. Chateau Lafitte or Chateau Latour. When they are nearly pure, and when they are offired to the public under their preper name, they are replaced by an artificial mixture in which the uncture of annuapredominates. However, the vinculturists of the New World do not remain discouraged by this double concurrence. The wonderful fertility of the seil enables then to maintain the struggle on the slopes of the hills which surround the Bay of Monterey and which are sufficiently elevated to b or dected against late frosts. Each vine at least bears sixty pounds of grapes- au equal result is not surpassed in any other place in the world. Let us add that these crops. whose prodigious abundance excits the astonishment and envy of European winegrowers, are sold in general at prices sufficiently remunerative. According to the author of an article published in the No. for th Cortary, the crops of good quality arworth about fifty francs the h-ctolitre forty-one cents per gallon.

A future of prosperity almost illimitable is open to all that portion of the American continent where the nature of the soil, the altitude, and the climate are essentially favorable to the culture of the vinc. An excess of production is not to be feared. They do not gather in California over 20,-000,000 gallons-that is to say, 200,000 hectolitres. This figure seems very insignificaut when we consider that France alone before the rayages of the phylloxers, pr duced each year nearly 70,000,000 hectolitres, or 1.540,000,000 gallons; and that Spain, where viticulture has only received serious development at a quite recent date, following the very curious statistics lately published by Li Kerista de Espana, has seen its exportations raised from \$40,137 hectolitres-15,453,000 gallons in 1550 to 7,391,975 hectolitres-162,623,009 gailons in 1566.

Why is California so slow to cover her soil with vineyards? The soil is fertile, the climate admirable, the returns are of an abundance unknown in the Old World, and the tariff on wine, which is nearly equal to an absolute prohibition, protects the products of the soil against foreign importations. What obstacles prevent, then, the wine-growers on the Pacific Coast from peasessing themselves of the markets of the United States?

It is much less in the frauds practiced by the merchants of San Francisco than in the inexperience of the first wine-growers that one must look for the principal cause of the mistakes inflicted on American viticuttur-The proprietors of California vineyards have lacked intelligent workmanship (Frenchmen do not emigrate. Spaniards and Italians, obliged by famine to have their countries, establish themselves in South America. The current which il ws toward California comes from the north of Europe, Some English, Irish and tiermans have located themselves on the Paeific Slope, and Yankee speculators have supplied the funds necessary to plant vine-

No one can be ignorant of the fact that carried the full name of HENNESS, and length requisite, lessons of experience and close, say to be to four modes beyond had evidently crossed the Atlantic in the practice are not alone sufficient, one must, the upper clusters and reardinary condi-Possess the instinct of art. One may be trons and one neels for the sale shorts,

Thus, then, the products of the vineyards leads a gardner, but must be lorn a vin -

On an explain without lift any the distrib which the pripe torshow met Among the thousands who can from the rigids in harp whire the vincisionlin whilit is impossible to fit I working i apublic fiser-ing as fir non-hand to make up for the abs. at an apen no of the as rim nuni rimer rice.

In spit of the incord stable progress acemplish libration atomy as massful to-lay arms by lither the planters to first master viewy critics who can be retain t the first rading ats of their trade. Nametoths of the individuals who probable possess that a him at knowledge in hispotisable to live to the porch is figuring, and Staining or orm as selemes, are adventur is wheare in table to perform any som on service. The proprietors have also given up trying these expensive and useless auxiliares. They have given the subject study, and have bearned to direct the worknon themselves. The women particularly, have distinguished themselv shytheir zeal, The N(s,t) state that any cuts the example of two English w men who came four years ago to s tile in Santa Croz e unty without having seen in their lives a grapevine, and who administer new with remarkable ability the most saccessful viticultural enterprise in the country.

FINCHONS OF VINE LEAVES,

Alluding to Dr. McCarty's article in the Very yirdist, on the functions of the leaf of the vine, D. S. Marvin says: There should be made this distinction between the blaves upon the vine. The several leaves of posite the ciusters of graps upon the lower part of the case may truly by to rured fruit buys apon which the d velopment of the cluster mainly hepetids, the heaves at the ends of the cane are more for the development of wood and the long thinning of the canes. Of course the functions of all plants are carried on through the leaves, Sometimes there is too much of a tendency to the development of frut, sometimes of wood. The best species and varieties of the vine are those that are somewhar venly balanced in these tendencies. This enables the vintner to turn the functions of the plant into the disclopment that he desires. In the case it y one vines and poor growers it is to weed growth, in mature and viz crous vines to a greater b velociment of fruit. If by aperlent the leaves upon the lower port, he of the cane are lest there is never as well-by lep distustors the reon, and if the ends of the cares are clipped off at the last bunch of graps starty in the sea. son the bayes grow much larger, with larger clust rs of fruit but the practice can be carried too far f r the health and permanence of the vine. If the most of our viz rous sorts are so capped year after year the vin \$1 come weakened, the health impaired, and disease techows. The skilled victure has no fast and invariable rules; he is govern I by the condition of each vine. It he wants more fruit from a healthy strong vine he shorters the cames and throws the forces of the vine into better viriculture is the most arduous, the most developed dusters and blaves at the base of complicated, the most barned, of all forms, the cases. Experience has demonstrated of gardening. To know how to prume to alith to this process can be carried on from nicety at the opportune moment and to the year to year, provided be discuss from too

RAISIN GRAPES.

Insect Enemies and the Art of Curing and Packing.

If water is handy the trench can be filled with water to advantage to drown the caterpillars. Of a very similar nature is the grape caterpillar or sphinx. This caterpillar when full grown is 31/2 to 4 inches long. It hatches from the egg laid on the vine leaves by the larger moth-the sphinx moth. The appearance of these caterpillars may be expected in July and August, To begin with the young caterpillars are hardly noticed. They feed on the top of the vines in the early morning and go down in the shade during the day. But in u few days more the damage to the vines is suddenly discovered, being stripped of all the leaves. The enterpillars grow with amazing rapidity and appear as if by magic. If left alone they will strip the vineyard entirely of all the leaves, exposing the grapes to the sun to burn and be seriously injured. There are two ways to combat this pest, viz: to destroy the moth from the eggs of which the caterpillar hatches, or to pick the caterpillar itself. The moth makes its appearance stready in May, and from then on all through the summer. In the evening it comes humming to the flower-garden, sucking the honey from the flowers of the honeysuckle or the petnnia. The color of the moth is grayish brown, with red and brown blotch on the hind wings. In size it rivals the small humming-bird.

A boy stationed with a butterfly net can catch hundreds of moths just as they come at aundown to feed, and as every moth lays thousands of eggs, the value of the destruction of as many moths as possible is at once apparent. Every vineyardist should have at least one small patch of petnnia flowers near the house. The moths will scent the flowers miles away and come to feed. If every vineyardist woule engage actively in the warfare on moths the caterpillar pest would be a thing of the past, However, if the caterpillar once has appeared in the vineyard, there is nothing to do but to pick them by hand. I know of a vineyard of 500 acres where 100 men were employed for three weeks to catch the caterpillars. Every day one ton were caught. Every man carries a basket with just a little water in it, on the top of which has been put a small quantity of coal-oil. This is necessary, for otherwise the caterpillars will crawl out of the basket. A year in which these caterpillars are found in greatest abundance is generally or nearly always succeeded by years in which none or a very few are seen. They never appear suddenly, but they give warning to the vineyardist by sending out a few in advance. The year following the vineyardist should be ready in time with his butterfly nets, and if the moths are properly caught but very few caterpillars will develop.

THE WEATHER IS AN ENEMY.

Even in the elements the rainin vines have some destructive enemies. I will only speak of those injuries that might easily be prevented by the foresight of the vineyardist. The young vines, which in the early spring burst out with a tremendouagrowth, are at that time very easily injured by heavy winds, which break the branches at the junction of the old wood and the new, and may entirely ruin that year's crop. I have already spoken of this under the heading of "Summer Pruning. The latter is the only effective remedy. The summer pruning of the vines is in are unprepared to combat them. The best to cure his grapes, but who is ignorant of the loaded one. Two men are required for

many districts counted on as a regular vineyard operation, always practiced at the same time every year, whether the reason is windy or not. Besides the loss fruit, a common effect of the breaking of the branches is the disease called the black knot. It consists in the formation of smaller or higger excresconces on the old wood of the vine. When young these black knots are of a vellowish green color, smooth and rounded and about the size of a pea, from that to the size of a walnut. As the season advances the black knot grows larger, and in the fall it may have the size of a large apple. It's appearance is then very rough. like roughest oak bark, and the colar is almost black

In the winter it can be easily broken off and is then seen to be porous like old decaved wood. The branches on which the black knot has grown have not properly de veloped in size, or may be even entirely dead. The damage on the Muscat is not as great as may be expected. In many vineyards the black knot is a yearly occurrence, but this year no diminution of crop has been observed. Still it is no doubt that the black knot is a serious drain on the vines, and if allowed to take its course it will eventually ruin them. The best remedy is to carefully remove the black knot during the pruning season. It may be cut out of the wood with the pruning shears, or even simply knocked off with a mallet. Many remedies, such as bluestone copperas, white of lead, etc., have been used to cauterize the wounds, but the most experienced vinevardist now doubt the efficacy of these remedies, and simply employ the shears to the mallet. The cause of the black knot is not fully understood. but it is very probable that it is caused by insufficient outlets for the rising sap in the vessels of the vine. The sap will, in early spring, rise with such tremendous force that the cells of tender vessels will extend beyond their strength and finally break, and cause an unnatural growth. In fact, the black knot is supposed to be simply a gall, without any insects, caused by the unnaturally heavy flow of sap to certain parts of the vine. After this gall or black knot once has started to grow, the continuous irritation attracts the sap from adjoining parts of the vine, which latter of course hecome exhausted, while the black knot continues to grow.

The sun-scald is a common injury to Muscat grapes. Those grapes which from want of sufficient protecting foliage are exposed to the bot sun and wind in June and July, become badly burned and will soon dry and spoil. Not only will the grapes he a total loss, but the bad berries must be picked off from the raisins at a great expense. The remedy for sun-scald has already been thoroughly discussed under the headings of summer-pruning and tying over, and I beg to refer to this. Damp rot is another destroyer of the raisin grape. It is simply caused by too great dampness of heground, and is to be feared in any lont well-drained vineyard. Proper pruning will allow sufficient air in among the grapes, while the draining of the soil will keep the surface of the ground dry. A more serious injury is caused by spring frosts, generally between the 10th and 15th of April. In the principal raisin districts of California these destructive frosts are of extremely rare occurrence-prehaps once or twice in every fifteen year. They occur so very sel-

remedy is to not plant raisin grapes in places where they occur regularly. As, however, there may be some localities which in other respects are favorable to the raisin grape, I will mention the remedy most generally used.

SMOKING A GREAT HEMEDY.

The only one practiced with success is smoking. The smoke is to be originated from any damp rubbish or straw on which is poured coal tar and water enough to prevent a blaze. Small beaps are places at short intervals all round the vineyards, not only in the direction of the prevailing winds, as the winds at time of frost are generally changeable and may drive the smoke in the wrong direction. When frost is feared and before the abermometer has fallen to 35 degrees Fahrenheit, the fire are kindled. The smoke spreads over th vines and prevents the further radiation o the heat. It also prevents the effect of the rays of the rising sun, and if the smoke has been sufficiently heavy and applied in time the vines will be saved from any great in jury. When vineyard districts or colonic are situated in smaller valleys, the whole community should join together and form regular smoke bands as regular intervalacross the valley. By lighting the fire simultaneously a smoke cloud may be made large enough to cover the whole valley and prevent the frost from forming. In large open plains the successful smoking is donwith some difficulty.

The already enumerated enemies and drawbacks to raisin culture may seem formidable indeed, and very discouraging to any one desirions of engaging in the rainin industry, but the facts are, and experience has demonstrated, that with proper care and foresight all these enemies may be overcome and success from year to year insured; and after ail, if there were no drawbacks to the industry, it would soon become so extended rhat to pursue it would not be prefitable. As it now is, the intelligent raisin-grower will reap the benefit. while the ignorant and indolent will be unsuccessful.

PICKING, CURING AND PACKING.

Varying with the season and locality the Muscat grapes ripen in California between the 10th of August and the 10th of September. The aeasons of early ripening are those most favorable to the raisin grower. as well as localities known for their earliness are those most valued for raisin vineyards. The value of earliness is apparent, It unables us to cure the grapes in the sun without interference of showers of rain, and the early market has proven the best, both as regards demand and price. When the grapes are fully ripe the picking should begin as soon as possible. When once picked the grapes do not ripen afterward. They must therefore be sufficiently ripe when picked. The riper the grape the better the raisin. The fully ripe raisin grape is characterized by great sweetness, not less than 25 per cent of sugar, and a semi-transparent amber color where partially exposed to the snn and light,

To ascertain the amount of sugar a box of fifty pounds of grapes of the first crop should be crushed and weighed by the saccharometer. If 25 per cent of sugar is reached the grapes are sweet enough to make good raising, but the sweeter the grapes are the better. Before I discuss the picking and curing of the grapes, it is necessary to consider the desirable points dom that when they do come the vineyardist in raising. The vineyardists who engages

the purpose he is try to accomplish, is not likely to succeed. I will first consider the points of quality in Muscat raisins. The color is to be a deep violet brown. The skin must be soft, pliable and finely corrugated, with concentric circles or folds. It must not show large, that surfaces hardened like horny nails. If the raisin cannot be easily compressed with thumb and forefinger, and assume a flat sharp when pressed between the table and the thumb, it has been dried too much. If again the juice runs out of the raisin when similarly pressed it has been dried to little.

The stems must be fully dried, of a light brown color, not green and sappy. When these points in view the vin vardist nav start with the picking. He must previously have supplied himself with trays. These tre made of thin, half-inch lumber, mailed to cleats one inch by one and a half inches vide and of desired length. The size of the rays varies in different places. The small ize, one and a half feet by two and a half. s used by many and considered very handy out the majority of the vineyardists use a arge size, two feet by three feet. The bingles should be well dried before nailng or else they will shrink and leave open places through which the raisins will fall and will be lost. The cleats should be wet or green, so as to prevent splitting. If to dry they may be soaked in water over night or for a few hours. The planed lumber for the trays varies in price from 9 to 121/2 cents in the shooks. For pailing the trava together a frame is made from wood and iron. The cleats are placed on the two short opposite sides, a heavy har of iron being immediately underneath. The planed boards are placed on the top and nailed with round wire nails, which clinch on the lower side as soon as they strike the iron. No cleats are needed in the long sides. A man can comfortable nail up 400 trays a day, at least after the first few days of practice. These trays must be distributed beforehand in the vineyard in piles at the

beginning of every row. In Muscat vineyards in proper bearing one or more trays are needed to each vine; while in vineyards of less growth and vigor, one tray may suffice for two vines. The picking is done by carefully cutting the ripe bunches from the vine, either by means of a small pair of shears or with stiff sharp knives. The less the berries are handled the better; the more will be left of the bloom on the raisins, In fact the bunches should as much as possible be handled by the stem alone. The bunches are placed directly on the trays, as close as possible, not, however, to touch. The part of the bunch which shows the stem the most should be placed upwards, so as to allow the stem to dry quickly, as well as to properly flatten the butt or handsomest part of the bunch. If the bunches are too large to dry well it is better to cut them iu two, and dry separately. A separate gang of men should go through the exposed trays and pick out all the bad berries from the large and fine bunches, but not from the inferior ones, as from the latter they may be removed by mechanical means more cheaply and quickly when the raisins are fully cured. To insure the full exposure to the sun one end of the tray may be raised by placing a small clod of earth underneath. After the grapes are two-thirds dried, which generally is done in about one week, they must be turned. This is done very rapidly by placing an empty tray over

the operation on each side of the tray. Each one hobbs a lath of the length of the tray and places it along the opening between the two trays. This is to prevent any berries from falling out while turning the tray. In this way the whole crop may be turned in a comparatively short time. A picker averages fifty trays a day; much, however, dopends upon the condition of the vines. These which have been carefully treated and attend d to during the pruning and turning are much caster and more quickly picked than those which have been neglected,

HOW TO PLANT A TREE.

As the time for tree-planting approaches, we have requests for articles on this subject, and we can hardly do better than reproduce one from the experienced pen of Mr. D. Redmond, then editor of the S. athern Cultivator, in which he tells how to beauty. plant a tree in the proper manner.

The best time, he says, for planting all hardy trees in mild climates is after the first killing frosts - November and December being the months in which the operation is most successfully performed. Transplanted at this time, they throw out small fibres from the roots during the winter, and start with the opening season into healthy growth. Still, they can safely be set out at any period from the first heavy frost until the buds swell, but if an early period within these bounds be selected for planting, the more vigorous will be the growth of the tree sunless it be like the fig. liable to be injured by the severity of the winter, or as some evergreens, to be blown about and loosened at the roots by the winter gales. If planting cannot be done before Christmas, all trees do better late in February than if planted in the sovere cold of midwinter.

When you have the ground properly trepared, and the holes dug, take up the tree with care, not cutting in the roots with the spade too near the trunk. To do this, dig around the tree, at a distance more or less, according to its size, a semi-circular to nehthe proper depth being a little below the horizontal roots, cutting them off at the extremities merely, in forming this trench, instead of mutilating large roots. When this trench is formed, reach under with the spade and cut off the tap root if there is one; then bend the tree over towards the trench and finish the circle by entting around the tree virtically with the spade-The tree can then be lifted and, if near the attached to the roots, and set in its new location, of if it is to be carried any distance, when the earth is shaken out, the mass of fine, unbroken roots will insure its safety in its new position. A tree can be taken up in this careful manner as quickly as in the ordinary random, hap-hazard WAY.

When taken up, carefully protect the roots of the tree from the frest, sun and dying winds. Thousands of trees are thus nearly or quite runned, or at least a year's up, should be kept covered with loos proofs, earth, near where they are to be set out, taking out a handful of trees at a time, as wented in planting

Prepare the ground for your trees by good top-soil out on one side, and the poor inflamable on fire,

on the other. Loosen up the bottom with a crubbing-hou; throw in about two inches of good soil to lighten what is to be thrown in, as if clay comes directly upon clay, it will harden and locome impervious to water. Now break in roughly all the sides of your hole, to fill up the bottom therewith as much as practicable, adding the good soil laid on one side, and if necessary other good earth sufficient to fill the hole to the proper depth for receiving the tree. Place the tree now in position, and let its general melimation be in the slightest degree possible to the southwest, for all trees have a tendency, if not checked, to recede from that point, and incline to the northeast, forming most of their wood in that position, a tendency that must be guarded against, both in planting and pruning, while growth towards the southwest side of the tree is to be encouraged, in order that the tree may preserve its balance and

Trees must not be planted too deep, which is the great error with nearly all planters. After a hole is entirely filled with loose earth, by taking out one good spade ful you will have room enough for the roots of a common nursery tree. Sight your tree when in position, and see that it is in line, and that the rows are perfectly straight, and then plant, covering the roots with good friable soil, and shaking the tree quite lightly and repeatedly, until it feels firm, by the earth settling among its roots; then press the earth lightly with your foot, and scatter the poor soil thrown out from the bottom of the hole upon the field, and the tree is ready for the rain. In our hot climate a little extra earth is thrown upon the roots the first winter, to protect them, which the summer rains will wash away.

In spring transplanting, the soil must be beaten about the roots much more firmly than in fall, as at that time the winter rains will beat the soil in about the roots. Fallplanted trees should be examined in spring, to see if they lean, and should then be restored to the proper position, a little inclining to the southwest.

After the tree is taken up it must be proped and fitted for its new condition. The roots have been necessarily considerably reduced, and the branches must be rereduced correspondingly. In all cases, then reduce the top. The French gardeners, in planting quite young trees, cut them down to twelve or eighteen mehes from the ground, and allow them to make their own system of branches on the spot "fair- bois place can be taken with the boll of earth | muf sur bi place " | In planting older trees, more care has to be taken to prune sufficiently, following the same principle of keeping up the equilibrium between the roots and brances. Let the roots, however, large the advantage. With a good system of healthy roots, it is easy to restore the top. Prune these older trees in pyramidal form,

Apple trees should have three or four substantial roots, and not be all fine, hairy roots, or they will never make a fine, substantial orchard tree, but always be loose in the earth, and finally blow over, growth thus lost. The roots, after taking unless anchored by strong, substantial

DR. JUNEMAN, an Austrian chemist, has to man. This fluid, when brought into deep and thorough tillage, and a few days contact with the air after the explosion of

PICKING AND PACKING

A. S. Watson, an experienced grape culturist in the east, writing on the subject in the Fruitgroeer says:

In picking grapes from the vine, they should usually be taken by the stem, which is clipped from half to three-quarter of an inch from the cluster, and placed carefully in the basket; in all operations avoiding touching the fruit as much as possible, as in so doing injures the Idoom, and the most delicate beauty of the grape. If there are four or five girls or women picking, there should be one man carrying baskets and to assist in carrying out the grapes. After the fruit is packed in the basket, when it is fresh and crisp, it is not in frequently the the case that in picking up the baskets, set ting them down, or carrying them out, the fruit is jostled so as to erack and badly injure much of it. Rough and wekward he'p have no place in the vinegard, and the very help that are strong and efficient in many other kinds of farm labor, cannot be properly impressed with a constant feeling of care necessary.

The packing room should be light, clean and airy, and in case the vineyard is of any considerable size, there is little danger of its being of too great proportions. All grapes should be picked and remain from 24 to 27 hours in the packing house, according to the weather and condition of ripcuess, before being re-packed. By that time the stem is wiltered and the skin somewhat toughened, so as to pack much better than when freshly picked, and in packing all cracked, green and inferior grapes, should be clipped out In packing commence at one end of the basket, laving the clusters with the stems usually inclined downward, requiring about tow layers. The baskets are filled so as to be slightly more than level-about one-half inch, say, more than level. In putting on the covers care should be taken in sliding them under the handle, as this is the way oftentimes that many grapes are bruised and crushed. It usually can be done by pressing on the handle so as to widen the the basket, thus enabling the cover to stide under without any trouble.

One feature deserving a good deal of attention is the fact that the fancy prices paid for a few of the very first grapes has resulted in tempting many parties to pick fruit not sufficient ripe. Of course they get a little better price for a very little while to start with. The result is that every basket of such fruit, being tart and really unfit for use, prevents the sale of at least a halfdozen baskets of ripe fruit, and has the effect of decreasing the demand and seriously injuring the price of subsequent shipents. The practice should be downedby the public, and as far as possible prevented. No grapes ought ever to be shipped to market until fully ripeted.

PROWING AS. CULTIVATION.

A reader of the Southern Californian calls attention to a statement made presymably on good authority that the plow should meyer be used in the orchard or vineyard. The reason for this, the paper says, is given as being that the surface roots are cut by the plow and the growth of the trees and vines is thus injured. Following this, the invented the most destructive fluid known use of the cultivator alone is advacated, the advice being given that the plow never be used. The writer has consulted several in advance of planting, make holes fully a shell in which it is held, becomes a gas horticulturists of long experience upon this two feet square, and one and a half or two, that destroys all living things within its subject, and from their experience it can feet deep, and in making them throw the reach, melts metals and sets everything be safely set down that the advice referred to is entirely erroneous, and if followed for

a number of years can but result in great damage. In the first place, the effort should be not to encourage the surface growth to the roots, but on the contrary to induce them to go downward where moisture is found. Where arrigation is tractised, unless the ground be seaked to a great depth, the tendency is for the roots to remain nearer the surface, and as a consequence the frequent application of water secomes necessary. If, on the other hand, the roots of the trees are encouraged to grow downward as much as possible, it is found that the necessity for irrigation grows I is and less each year and sometimes ceases alton ther

The aim of irrigation should be to allow the water to soak as far down as possible To this end, it is essential that the soil be loosened deeply by the plow. In many soils there is a hard-pan at a depth of eight or ten juches through which the water with difficulty finds its way. In all kinds of soil the constant use of the cultivator without the plow tends to assist in the formation of hard-pan at the depth reached by the cultivator. This is seen in the lightest sandlest loam. After two or three year's use of the cultivator there will be a thick shell formed, which is very apparent when a plow is used thereafter.

After much experimenting, the best plan of cultivating an orehard or vineyard would seem to be this: In the early spring, when the ground is thoroughly moistened with the rains, just on a good plow and have the soil broken just as deep as the share will go, To be sur, great masses of young roots will be turned up-that is, if the plow has not been regularly used before-but that need not give cause for alarm. After the first year of this sort of treatment the surface roots will become less and less in number, and the plants will draw their sustenance from beneath. After plowing ; once will suffice each season: the cultivator should be kept going, and the surface for a depth of six or eight mehes should be kept in as fine tilth as possible. This will act like a mulch, and will preserve the moisture beneath, as well as tend to attract it upward,

In sections where irrigation is not practiced this same method of plowing and cultivation should be followed. Where no artificial sources of supply are available, it becomes necessary to the highest degree to take full advantage of the rainfall. Where constant cultivation without plowing has allowed the formation of hard-pan, the rain will not soak in to any depth, but will remain on the surface and ron off to a lower I vel, but when the soil is kept loosened to a good depth it is in condition to absorb all the rain, and hold it for the sustenance of plant life during the dry sunmer season, ---

CULTIVATION AFTER RAIN.

There is a constant using of moisture through the soil to replace that evaporated on the surface. In any seal containing clay this water holds much man-ral substance -mestly potash. This the evaporated water is obliged to leave, and it forms the well-known "erust" that is found after every heavy rain. The crust keeps the light and air from the soil. Breaking it before it is too dry, by cultivation, is doubly helpful, as its mineral elements placed again under the soil become decomposed and fit for the use of plants. Hence, cultivation after rain is equivalent to a top- irossing of as much mineral matter as the crust contains, besides more or less of ammous or available nitrogen.



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AGENTS.	
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FRIDAY...... NOVEMBER 10, 1888

MISS FIELD is doing good work in the East, and ministers, of all denominations, and physicians, favor her doctrine that the introduction of California wines, into more general use, is the most effective means of checking drunkenness andthe kindred evils which attend the sale of whisky and other ardent spirits. In a letter just received from Miss Field, now in New York, the Viticultural Commission is informed that a Boaton clergyman, who has just returned from Greece, advocates the general use of pure wines. The minister is credited with saying that he considers the use of wine would be a beneficial reform in this country, as it is an antidote for intemperance. His conclusions were reached after observations among the modern Greeks. He believes the only drunkenness in Germany and France is due to the use of absinthe.

Another letter, written from Washington, is quoted as follows: Those charming membera of Washington's diplomatic corps, Baron and Baroness Fava of Italy, in recently being introduced to some California claret by Miss Kate Field, were greatly pleased with it. "Excellent! The pure juice of the grape!" they exclaimed. "Approbation from Sir Hubert Stanley is praise indeed."

THE WINE industry in California should, of all others, be well represented at the Exposition to be held in Paris during the coming Spring. Our wines and raisins are now steadily working their way to the front rank in the markets of the world, and on this account, in France, the great wine producing and wine-drinking nation of the earth, particular interest will be taken in our display. Every assistance should be rendered the Commissioner for their distric in collecting samples, towards which end united action, on the part of wine and raisin-makers, is of the utmost importance.

According to a statement prepared by the Commissioners of Internal Revenue, the per capita consumption of wine in the United States was 0.54 gallons in 1887, while in 1840, it is estimated at 0.29 gallons, showing a material increase. A corresponding decrease is noted in the per capita consumption of distilled spirits, which is placed at 1.19 gallons in 1887, against 2.52 gallons in 1840.

IN ANSWER to a letter from Clarence J Wetmore, Secretary of the State Viticaltural Commission, asking for information on the value of California dried grapes in the French market, A. Dufour, a prominent dealer in this commodity at Bordeaux, writes:

DEAB SIB :- It is difficult to report ex actly, without testing a large sample, buin face of the value of Smyrna grapes (currants), we are of the opinion that the Zinfandel would fetch about \$1.40 for 110 pounds, landed at Bordeaux, stemmed. The unstemmed grapes could be used, but their value would be, of course, far less.

The crop of grapes has been large in France this season, which will reduce the making of wine by means of dried grapes

This firm is at the disposal of any parties wishing to try our market for the said Zinfandel grapes.

SAN FRANCISCO, Nov. 7, 1888.

The Bradstreet Mercantile Agency reports sixty-nine failures in the Pacific Coast States and Territories for the month of October just closed, with assets \$167,-162 and liabilities \$322,588, as compared with forty-eight of the previous month, with assets \$204,860, and liabilities \$390,-186, and forty-four for the corresponding month of 1887, with assets \$53.087, and liabilities \$174,937.

The failures for the past month are divided among the States and Territories as

State. No. California 63 Oregon 4 Arizona 2	Assetts, \$151,462 00 12,500 00 3,200 00	Liabdities, \$293,209 00 20,379 00 9,000 00
Total69	\$167,162 00	\$322,588 00

Six million dollars has been advanced by London capitalists to build railreads in Honduras and elsewhere so as to concentrate the fruit market at certain selected shipping points, a syndicate having been organized in New Orleans, representing \$19,000,000 capital, that will seek to control the entire fruit output of Honduras.

Exhibits are constantly coming in at the headquarters of the State Board of Trade. Among those recently received are grapes, apples and pomegranates from San Diego. Solano county has a display of preserved and dried fruits, most tastefully arranged. Nevada, Oregon and Arizona will all be represented.

THE BAISIN crop for the year will aggregate, according to the reports in the raisin districts, fully 1,200,000 boxes. The raisin pack of San Diego county alone is estimated at 150,000 boxes, of which El Cajon valley will furnish 100,000, and Escondido 30,000

THE NEW YORK wine papers in summing up the changed prospects for the year in the grape districts of the Eastern and Western States, believe that good old wines will be in demand this year.

THE ELECTION is over, and few will be found to regret it. Everything passed off quietly, and the country is to be congratulated on the cleanest and most orderly campaign which has taken place in many

THE STATE Board of Viticultural Commissioners will open its Wine Exchange in Platt's Hall in the early part of next menth.

PARIS EXPOSITION.

The following circulars have been received from the Commissioner of Agriculture, and his representative directing attenion to the exhibits in this department which are desired for the International Exposition to be held in Paris during the coming year. The co-operation of all connected with the agricultual industries of this section of the country is solicited:

EDITOR MERCHANT:-The Congress of the United States having accepted on the part of this Government, the invitation of the French Republic to take part in an International Exposition to be held in Paris in eighteen-hundred-and-eighty-nine, has directed the Commissioner of Agriculture by joint resolution approved May 10 last, to collect and prepare suitable specimens of the agricultural productions of the several States and Territories of the Union for exhibition at said Exposition.

A special division has been organized in this Department for this purpose, and a number of Special Agents have been appointed by me to collect suitable specimen for exhibition.

Statistics support the assertion that ago culture furnishes four-fifths of our exports and it is to the interest of all our States and Territories that the United States should be creditably represented by this Dpartmen at the great exposition which the French people have organized at Paris, and which will attract countless visitors from all countries of the world. It is therefore needless to dwell upon the importance of the agricultural section of the United States exhibit

In view of these facts, you are cordially invited to cooperate by every means in your power in the special work assigned to the agents appointed by this Department in this important duty.

If possible one of the agents will call upon you in the near future; and in the mean time this Department would be pleased to hear from you and to get your views as to the most appropriate products of your section of country, and such as would be most desirable for the purpose indicated.

Very respectfully,

NORMAN J. COLEMAN, U. S. Commissioner of Agriculture.

Washington D. C., October 12, 1888.

EDITOR MERCHANT;-The exhibit which the United States Department of Agriculture is preparing for the International Exposition in Paris, in 1889, is to include materials to set forth the history, status, work, and tendencies of agricultural education and agricultural science in the United States. For this purpose, printed statement, diagrams, pictures, and other illustrative matter concerning agricultural schools, experiment statious and other like institutions, are desired. To this end will you kindly fill out the inclosed circular with of Agriculture is the same as the large of data regarding your own institution, and return it to the Department in the inclosed envelope, at your earliest convenience.

The Commissioner of Agriculture has appointed me to take charge of the exhibit, to be propared by him and to represent him in all matters pertaining thereto; and Prof. W. O. Atwater has been charged with this educational division. I would beg you to help to make this part of the exhibit worthy of your institution, and send to the Depart ment by express, or otherwise, at its expense catalogues, reports, and other publications. which will explain in detail the facts summarized in the blank form, in order that they may be used wholly or in part for the exhibit at Paris. By doing so you w greatly oblige,

> Yours respectfully, C. V. RILEY,

Representativ Washington, D. C., October 12, 1888.

THE PICHOLINE OLIVE

EDITOR MERCHANT:

Have we in California got the true Pic oline? I unbesitatingly answer we have no unless the "Oblonga," which I and son others have introduced from France, should prove the true Picholine; however, even this I have my doubts, as it manifests wit me too much tenderness to frost even fe a Picholine.

I think there is no question that a cruhoax has been played upon California i the matter of the true Picholine. An olive said to be imported by the late B. B. Rea ling, has been taken up by the nurseymen and dubbed by them the Picholine, an sold in immense quantities, during the lat dive craze, and now that the olive is frui ag, California may weep: I, myself woul cep if I could, but I am too mad for tha ake many another brother fool, I though he nurserymen knew what they sold, an dd no untruths, and I bought their so alled Picholines by the thousands. T ome of my so-called Picholines have fruit d, and there is not the pretense of a tru Picholine among them. I am thrown o my back, and left with the best remedy a hand, to graft, which is no child's play, t bud, which is no holiday task either. To wise or the lucky ones who refused to abid except with the Mission olive, may now well cry "I told you so," and scratch thei elbows while they chuckle.

What is my groundwork for saying that the clive which I will call the Redding olive, is not the true Picholine. First. have seen and eat many an olive called Picholine, but never the like of what my so-called or Redding olives are bearing. The Picholine olives I have been accustomed to were long, peculiarly long I would add, as long at any rate as an ordinary Mission, though not so thick. I would not call them small unless placed over against "Queen Olives," but strikingly iodiosyncrahically long; indeed, they were true oblongs. Now the olives my trees are bearing put me in mind of very big peas, They are not oblong; their insignificance is their marked character. Second. The U. S. Commissioner of Agriculture in the MERCHANT of the Redding olive, a small oval olive weighing about one-sixteenth of an ounce, whereas, the following, says Tu Breuil, of the Picholine- "olive large and very prolonged" in which latter expression concurs contance. If then it can be shown that the small of the U.S. Commission r Du Brenil; or the oval of the U.S. Commissioner is identical with the very prolonged of Du Bruil I'll wish myself in error, but if it can't I hold my point proven.

As I never want to appear in company with the fox who sought all the other foxes to cut off their tails because he happened to lose his own, I advise, if I may dare, all prospective purchasers, of olive trees to resolve what is the Picholine, and who has it before they purchase. For me, no more of the Redding Picholine, or of any other till I know further. Gentlemen, it is time to halt if we would not do worse.

JOHN A. STEWART, Etha Hill Santa Cruz Co., Cal.

THE TAX ON FRUIT BRANDY.

The wine-growers of the country should he made aware of the fact that a bill to abolish the Internal Revenue tax on Fruit Brandy has been introduced, and is pending in the U.S. Senate, says the N.Y. Wine and Fruit Grower. There is scarcely anything that could be thought of which would deal the brandy distillers so destructive a blow as this processed law, it would in fact be a tragedy for that interest, and put an end to anything in the shape of pure wine brandy. There is not a brandy distiller in the whole country while does not know that the moment the hand of the law is litted from the regulation of this industry, the door would be exerted to eadless fraud and adulteration, the high which greedy rascals would rush in diexes. Within a period of less than a year, the reputation of American brands s for parity would sink below contenest, and we should have only the mad sup a lulterations which has brought shame and rum on the French brainly

The only place on the globe where jure wine brandy is made now for commorcial purposes is in the United States, and the only security and guarantee it has for purity rests upon they remented expervision The tax should not be removed. All who are interested in the wine industry in this country, should onto an emphatic protest against it to their respective Senators and Congressmen. Any political party that proposes to by violent hands on this industry, should be made to understand that they are facing a grave responsibility.

Sugar Quotations

California Sue at II fin my price list dated November 19th Circle A. Pat Cube, 71,c Circle A Crushed, 71, c. Time Crushed, 71, c Extra Powdered, 71,c; Dry Granulated, 6% e; Confectioners' Circle A, 6 .e; Extra C, 55,c; Golden C, 5 4c; Star Drips Syrup, in bbls, 20c; hf do, 221,c; 5-gall kegs, 271/c; 1 gall tins, 371/c per gallon,

Price list of the American Sugar Refinery dated November 10th: Extra Fine Cube, in bbls, c; Circle A. Crushed, 71,c; Fine Crushed, 74, c; Powd red 73, c; Extra Fine Powdered, 7 (ac; Dry Granulated, c; 7)2XX Dry Granulated, fe , c; Confectioners' Cirele A, 6 .c; Extra C, 5 .c; Golden C, 51, c. American Golden Symp, in Jobls, 20e per gallon.

WHOLESALE MARKEL.

Quotations given as for any little to the whole ASSESSMENT ASSESSMENT

Halves, Quarters and Legaths, 25, 50 and 75 cm-ighter respectively than whom a x-process

Lond in Layers, show open box \$2 00or \$2 (1057) ... 2 (167) 2 25 ... at 1 75 1 (10 at 1 50 at 1 75 Layers, per box.... Loose Muscub by common, per box ... Unstemmed " in so ke, per R. . . a = 2.000y 5. y Mg ** Proper 2008 to Sultanas, uable a his controls. r 19 attical fire , th The Tool, "

Gapes, Muscat, 25₂ n s = 1 40 r 1 50 (cass. 4 50 cms. 4 50 cms. 2 25 r 2 15

35 or 4 Sun Oried Grigory Steadow, slick A festione Looks,

In the San Francisco Market, Grapes are steady. We quote With Grap's \$10.00. 400 45 for Tokays and 100 50c for Muscut. Le cut just above a bud at one end and just several will attack a ripe peach simultant grape, as pointlegists understand it.

MARING A MINEAURO

Montgomery (Abr.) Advirtiser: I am going imbos in drill. They will take root more to put out four acres in grape vides this readily if the top load is covered from half winter and a few pear and apide trees. I to one meh under the surface. am entirely mexperienced in this business and write to intrude on your knowl dg and kindness for the desired information. My confidence in your judgment prempted me to call upon you in this particular. My farm is twenty miles east of Alanta, Gallon the Chatta', ooch o river, four miles from Norcross, the near strailroad station. The bind selected for a viney and as a bid, babeen cleared about soveryears, based of found item and dark red soil. The head of very good, and produces don't three to athe of a bale of cotton per ser . The set selof this had is the most appropriatiples I can find for the grapes. New will you please tell me if this is a favorable plan for kind of soil is especially adapt d to the graps. Also, will you tell me the most profitable kinds to plant and where I can secure them the cheapest, I will want about four thousand cuttings. Any information you appreciated by me. Preuse advise in the most inteligent way for me to persue to start an orchard and vincy oil."

To this Prof. J. S. Nowman, of Au burn, Ala., Agricultural Cellig, who obts the "Agricultural D partment" of the Adreferer replies as follows. The sal and exposure are well a lected. The soil will r tum fertilizers applied to it soll bear is susceptible to the high state of pager venoent. so necessive for enument success in grape eniture as well as for that of apples and pours. The exposure to the east is just what is moded for gropes since the early morning sun dires off the moisture from the vines and fruit before the tomp rather has been elevated to a point favorable to the vegetation of fungus spores. When the temperature rises the moisture has been dissipated so that conditions favorably for mildew and rot are not likely to be supplied. planted upon a western or northern exposure the moisture remains until the sun has raised the temperature and the conditions rdied.

If you propose using cuttings just ad of to prepare your land for the reception of the vines, enped by vines and trees and so are, broadmaximum quantity of vines. Plex b tween the terraces's veral times, with hellside plow, throwing each furney down the hall. This will partially level the soil beity of surface washing. It fore planting make a liberal application of ashes, lone meal and cotton sold meal, and when the trees and vines are planted in deal a heavy application of compost and tool in a in off comes, the plants, both it is and vines. will be planted in horizontal in section in .3 34 to the brraces.

The cheapest way to produce catting will be to assist some one who has a vinyard to prime his vines for the wood. If or sects and birds. They are quite a larg (@\$15 7 tou for Zinf and 1 and \$10 0000 \$45 will thus bear how to prune as bear the said handsome bettle of an relevabel) 00 for other kinds, fable Grapes, Per50c cuttings. The latter need not be in its fresh B box for Black, 40 00 500 for Counchous, six to ten inches in tength. They do do wood species. When they are premified it exist nily approaches, instead of the

bud to avoid injuring it. The cuttings may ju few hours, A correspondent writes as follows to the be planted in rows one foot apart and say

A CHEAP WASH

The use of can-tic sodice, simply to it almit of its being diluted with water, and the public in betures, the advocacy, as a bayes a sticky resulte upon the bayes. Stat of Chitana with the full authority ished, but in the ourse of a f wideys this is disclose in teembedy the id-al of morallarge persontage of the legyer were desclibed selection and me head authorities.

It has the property in an entire it. It is always subject to trust Kate Field's d give of saturating the egg masses, and I have so a numerous distances where these any which that I will defines as the genius will give me on this subject will be highly had been saturated and the eggs kided, of hismanity her parity of purpose, and while the females to which they were of- morald hardsman. In this age, not lacking tasked ascaped undarmed, and excreted in its shams and superficialities, it is inspirnewegg masses upon the old ones, the new ing to know a representative woman in ones being very noticeable by their pare whose theories and includes entire confi-white every. There never us define washed one may be placed, whose ideals are not upon the red scale, but reliable parties who merely a masquerade of effervescent emohave done so inform me that it proves fatal, tions, whose aims are not in the line of scuto a large percentage of these scales. One thing greatly in favor of this wash is its remarkable cheapness; the materials of which it is composed can be purchased at such a rate that each gallon of the wash will cost only about 1, cent.

A PEACH DISTROYER

The Florence Enterprise sn st It has been observed for several years that the injecting penches in this valley have been attacked each year by some insect that devoured the mellow side of the fruit to the pit and upon such an exposure. If grapes are thereby destroyed it for all uses, but the exact nature of the enemy was not discovered until quite recently. Mr. II G Ballon has given the subject his ear tul atfavorable to rot, and, mildew, are thus super tention and, finds that, the depredator, is a species of bettle, not mentioned in the standard works of entomology, and, alrooted vines you will have a year in which though the destroyer is now fully identified, its habits are yet almost known. An This will best be done by ter- old treatise describes an analog ors insect racing the entire slope of the lift to be eed in the Carolinas, called the brilliant Allharms, and it also, speaks merl ntally of cast in peas, fertifizing them to produce as its closely related species, the Changeable Altharina, the prolatory bettle of this valley, of which it gives very little informa-, tion further than a clue to its identification, In this valley it appears after the first sumtween the terraces and prevent the possibility mer rains, apparently from the low, moist lands, and immediately seeks the peach orchard where it selects the choicest fruits and ruins them. In case there are no riponing peaches at ter is upon grapes and even months growing cornstalles, evidently the furrow opened to receive the plants, so king the saccharine pages of the front or plant. It disappears during the latter part of August. Some years only on the bw appear and they have never been deof erved in formidable numbers, as they probably full a proy, in turn, to their in changeable color, quite unlike the least a.

below at the other, cut half inch from the leansly and devours all its incli or portion in

MISS THED & SUCCESS

A New Or, and correspondent writing to the Tons In . 50.55 After extended observation of California vineyards Miss I reld has returned to the Last with some new illuminations on the 6 mpcranec probdue the result to the condition which will I in, which she will probably place before it does not, therefore, net as an insectibe, temperature measure, of the pure, light, its caustic properly having been largely or native wines as a tible loverage. She wholly mentralized by the risin. This has been made a riprosoftative of the giving them the appearance of leang varie of the position, and her convictions on this is blown off of the leaves, beiving the ity, commons one at lenight oment. It latter in a clean and he lithly a clim is a late the agramate use, and not at all the have used this wash up a orange trees, and edeas of the pure grave pine in which Miss have so in it used on orange trees, also on Treld beloves. As a smandant she regards the grape. My neighbors tell me that this cross bushes, and in a other instance were it is for less not more than ten or coffee, either leaves or fruit it pued by it, while a im which position she is in accord with the

> has a raboximent of common sense a qualsational reform, but are, rather, screne and strontast, because they are based on practicolds methods, clear intellectual insight, and sustained by not le motives.

Soda Water

The profits which dealers in carbonated havings may reasonably hope to make, says the Antiquet, can be readily inferred from the following accurate estimate of the cost of manufacturing each loverage:

thre glass of plain soda costs one-tenth of a cent.

One glass of soda-water with syrup costs

11, cents. time glass of mineral-water costs I cent, One glass of root-heer costs I cent.

time glass of ginger-ab costs I , cents. One glass of fine draught champagne

Agriculture,

costs I cents.

It appears that forty-four per cent of the earnings of mankind are agricultural, but in the United Kingdon the rate does not exceed twenty-energiand even in the Unitol States it is but thirty eight per cent. On the other hand, in Bassia it is sixtyseven, in Spain sixty per cent, both of which countries are very poor. It is only by the use of improved machinery that agricultural can now be carrid on with profit, and in this respect Bussia and Spinn are sine very backward.

VIIIs Preparent, a curious grape from Bright, which has been trimed by some onthors. Vitts, Gonzyledes, is the subject it is a dored plate in Goeta Fora The blaves are trifolate and have brilliant red stripules and tadm's. The stems are contrassy wing d. The fruit is in a smoot you it made berry solds are ampelopsis, I to which branch of the grap vine family

OUR NATIVE WINE SHIPMENTS BYSEA.

PER P. M. S. S. CO'S STEAMER COLIMA, OCT. 30, 1888.

TO	NEW	YORK.

MARKS.	SHIPPERS.	PACKAGES AND CONTENTS.	GALLONS	VALUE
α F	Kohler & Frohling	10 harrels Brandy	464	893
*1	49	63-5 tarrels broady	152	35
D & Co	B Dreyfus & Co	60 barrels Wine	2,940	1,68
		26 kegs Brandy	260	17
A	· Curpt & Co	2 cisks Wine	122	11
B	Lenonmand Bros	21 barrels Wine	992	21
В	G Cappuro	2 barrels Wine	190:	-4
		1 barrels Wine	51	
É P	Napa Valley Wine Co	25 barrels Wine	1.270	17
n diamond	Ang Erz	12 barrels Wine		18
in diamond	S Lacimian & Co	7 Jurels Wine	3597	
th diminord	14	Leise Wine	0 //-	25
C)	11	1 half burels Brandy	102	20
P	Williams Dunond& Co.	19 barrels Wine	2.521	68
	11	2 half barrels Wine	54	10
	Trapoli, Berges & Co	104 barrels Wine	1,9892	1,64
n diamond	Kobler & Van Bergen .	85 barrels Wine	4.182	1,25
			18,987 978	\$6,78 1,98

TO CENTRAL AMERICA.

H G, Guatemala N	V Bergen	2 cases Whiskey	1.5	\$57
CAH, La Labertad U	rrela & Urioste	I keg Wine	147	11
D S, A. ajutla D	ieckman & Co	I keg Wine	20	20
V H S, Acajutla	4.6	2 cases Wine		25
B B & Co. La Libertad	loom, Buruch & Co	3 barrels Wine	152	76
A C D, Acajut'a W	timerding & Co	I barrel Whiskey	38	116
P A. Puntas Arenas	6	2 barrels Brandy	50	223
T A, La Libertad K	oh'er & Frohling	Lonarter cask Wine	33	33
P in diamond, Puntas Arenas. B			551	625
M.B. Puntas Arenas		7 half-barrels Wine,	193	160
JC N. Puntas Arenas	4.6	2 barrels Wine	100	87
R M, Acaputla	14	2 half-barrels Wing	55	65
A C D, Acajutla	4.6	9 half barrels Wine	243)	
41	11	9 kegs Wine	00 !	
H	14	16 kezs Wine	801	360
BB&Co, La Libertad L	S Hass		85	115
C G M & Co, Santa Anor R		2 barrels Wine	102	77
R S, Champerieo R		2 kegs Wine	40	50
C A, Puntas Arenas M		6 barrels Wine	120	100
V V, Ln Libertad E			20	20
M Y, Champerico E		12 parrels Wine	180	159
BO, La Libertad		9 cases Wine		39
R M, Acaputla J		22 ca es Wine		88
E G. Coristo de			52	31
d M C, Punta: Arenas				50
Y F P, La Libertad	**	S kegs Wine	80	56
M H C, Puntas Arenas		2 kegs Wine	201	15
H G, San J se de Qunt N	apa Valley Wine Co .	Grases Whiskey	1.5	58
1,		2 barrel Wine	52	46
S C in diamond, Corinto	+ 4	12 cises Wine	39	56
4	44	1 case Wluskey,	2	7
Total amount of Wine 43	eases and		2,221	\$2,229
			155	353
			03	223

TO MEXICO,

		1 half-barrel Wine	281	815
V & Co, Acapulco,	J Gundlach & Co	8 barrels Wine)		
14	**	1 % barrels Wine		
1+	**	2 kegs Wine	447	252
11	0	1 keg Brandy	25	52
			475 25	\$265 50
Total amount of Islami,		73 4 75 4 75 4	191	

.... E L Goold,....

TO SOUTH	AMERICA,		
F. A F. Ecnadar Arpad Hara zthy & Co	2 larrels Wine	23	81
TO NEW YORK-P	ER BARK ENOS SOULE.		
V S & Bro	50 tariels Wine	1	
D M K	25 barrels Wine		
A C	30 packages Wine		
P F	29 packages Wine		2.5
	U ₂ packages Brandy)	28	85
14 00 14	25 harrels Wine 1	8,421	3,36
Sebastopol Martin, Fen ier & Co.	94 harrels Wine	2,568	1,02
G & M R Schmidt	12 barrels wine	2,016	80
W& Co, in diamond Berringer bros	IU42 Darrels Brandy	240	48
J W & B to wning & schin dt .	. 100 parkages wine	14,689	5,87
A G & C A Greenbaum & Co .	tim pickages wine	4,977	1,99
X in diamond Konler & Van Bergen	Tim Packages wine	- o-c	
OM C. T.	50 barrels Wine	7,375	2,95
CMC, Jr Field & Stone	. 1 package wine	50	2
J.C.S B Dreyfus & Co	412 packages wine	1	
B D & Co	250 packages Wine	0.000	* * * * *
J A S " M in diamond "	173 packages Wine	35,362	14,12
DI III IIII DONG III II I	88 packages Brandy	2,301	4,60
k & F Kohler & Frohling .	205 packages Wine	00.550	0.00
J in diamend So be Bros & Plagem's	202 packages Wine	20,5501	8,22
J III diamond			60
TEW TEWA	2212 barrels Whiskey		1,65
J F W	t cask wine	6.1	2
A 1 Co C Schilling & Co	SUO Darreis wine	9,135	3,77
Total amount of Wine, 2 cases and		105450	\$42,17
Total amount of Brandy,		2,569	5,18
Total amount of Whiskey		750	2,23

MISCELLANEOUS SHIPMENTS

DESTINATION.	VESSEI.	RIO	GALLONS.	VALUE,
Honolulu	Zealandia	steamer	10	\$18
Victoria	Umatilla	Steamer	5O	5.7
Liverpool	Wayfarer	Ship	1,290	1.400
Santa Rosal'a	Undaunter	Schooner	2,820	820
Kahulin	J D Spreckels	Brig	80	67
Hongkong	trity of Feking	Steamer	#SU	60
Total			4,310	\$2,420
Total shipments by 1 a Total Miscellaneous shi	pama steamers	24,74	ti gallons	\$9,333 44,599
Grand totals	****** ** *****	131.40	- :	53.932

Description of the Blueberry.

The Blueberry is a valuable fruit, and is a reliable fruit to grow in our northern States where the more tender varieties of fruits winter-kill. It is perfectly hardy, having stood 40 degrees below zero without showing any injury to the most tender buds. It ripens in this latitude about the 1st of July, and is borne in clusters like currants; shape, round; redshish purple at first, but becomes a bluish black when fully ripened. The flavor is equal to the ruspberry, a very mild, rich sub-acid, pronounced by most people delicious. It may be served with sugar and cream or cooked sance, and is splendid for winter use. The plant secues to flourish in all soils, and is a prolific bearer. It grows very stocky and makes a nice hedge. The shinning dark green leaves and the blue fruit making a pleasing contrast. The demand for the fruit is great, and usually brings 15 cents per quart. They commence bearing the first year after setting out, and yields a full crop the second and third year after setting out. They are propagated from suckers and root cuttings. The plant is about the height and size of the currant bush, and very stocky, holding the fruit well up from the ground. Plant should be set in the fall and spring, in rows two or three feet apart, and five or six feet between the rows, making a perfect hedge, and no grass or weeds should be allowed to grow between rows.

PRICE LIST:

1 Dozen Plants by mail, 60 cents. 2 Dozen Plants by mail, \$1.00

100 Plants by Express, 1,000 Plants by ex. or freight \$15,00

How to send money: - I would prefer to have money sent by American Express order, all sums of \$5.00 and under, cost only 5 cuts, and if order is lost, money will be promptly refunded to sender. If not convenient to obtain express order, money can be sent by registered letter or post office money order or po-tal note, drawn on Portland, Mich. Postage stamps will not be accepted only from our customers that cannot obtain an express order—only those of one cent denomination wanted.

Plants are carefully packed in damp moss and delivered to express or freight office, for which I make no extra charge. Address

DELOS STAPLES, Portland, Ionia Co., Mich.

FANCHER CREEK NURSERY, FRESNO, CAL,

OFFERS AN IMMENSE STOCK OF

Fruit Trees, Grapevines and Ornamental Trees, SPECIALTIES:

White Adriatic Fig. Ten Tested Varieties of Table Figs, Olivea Pomegranates, and also a Fine Collection of Palms, Roses and Oleanders.

13 A five-pound box of White Adriatic Figs sent by express to any address on receipt of \$1 50. Send for Fall Catalogue and address all letters to

F. ROEDING, PROPRIETOR, FRESNO, CAL.

AMERICAN PROGRESS

The following statistics, according to the Philadelphia Commercial List, show the growth of the country since the year 1860.

Twenty-three years ago we were 30,000,000 of people; now we are over 50,000,000.

Then we had 141 cities and towns of over 8,000 inhabitants, now we have 286 of such cities and towns. Then the total population of our cities was 5,000,000, now it is ahont 12,000,000.

much,

The iron product amounted to 900,000 tons of ore; to-day it foots up over 8,000,-000 tons a year, almost a nine-fold increase.

In 1860 our metal industries employed 53,000 hands consumed \$100,000,000 worth of material, and turned out about \$180,000,-000 in annual products.

To-day these same industries employ 300,000 hands consume \$380,000,000 of material, and their annual product amonuts to \$660,000,000.

In 1860 the wood industries employed 130,000 persons; to-day they employ 340,000, while the value of their annual product has trebled.

The woolen industry employed 60,000 persons then, and now employs 160,000, while our home mills, which produced goods of the value of \$80,000,000 in 1860, now turn out an annual product worth \$270,000,000.

Finally, there is cotton. In 1860 we imported 227,000,000 yards of cotton goods; in 1881 we only imported 70,000,000.

In the meantime the number of hands employed in American cotton mills has increased to 200,000, and we export over 150,000,000 yards of cotton goods a year, instead of importing 227,000,000 yards as we used to do.

The silk industry employed 5,000 persors; now it employs about 35,000, seven times as many.

We import no more silk goods now than we did in 1860, but our own mills, which Our coal mines then produced 14,000,000 produced goods of the value of \$6,000,000 tons now 85,000,000 tons, or six times as then, now turn out a product of over \$40,000,000.

> In 1860, 12,000 persons were employed in American pottery and stoneware works; to-day about 36,000 are employed in this industry.

The chemical industry which employed 6,000 persons then, now employs 30,000,000.

In the meantime we have nearly five times as many miles of railways and double the number of farms, and the yielding more than double the number of bushels of cereals.

In the production of sheep we had 22,000,000 of them in 1860, to-day we have over 40,000,000 of them; and whereas we then produced in this country 60,000,000 pounds of wool, now we produce 240,000,000 pounds.

Finally, the total of our exports has doubled. In 1860 it stood at \$400,000,000 and now it stands at about \$900,000,000.

SEND the "MEACHANT" to your friends lia the East

OLIVE RANCH OF 448 ACRES.

Or 240 acres in one place and are in the other. Sold rigother in apart having ten number drive from rangeal south 11,000 offices plant 1, only the bar to bear in 1857. Fully of applic with built of any algorithm of the figures. ings, agricultural to subsequences, Sorty thou, Sortia i via foring sotons of buy and planty for at line strand to the following and a law of water. Tell perfect Securities Security perpetty to the house, angeld Barbara county, the Land and Little one xe Will's Pate Porgo

For part, whare of first

W. A. HAYNE, Jr., SANTA BARBARA

Firty acris pointed in the filtest variety of Anna II barab a carrent traca-11. S 16. V . th. ris C . . / · - W 11

FARM FOR SALE.

The Lundrell acres in Shema County,

It pairs .- M) HAST CAL. E.S.

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NILES. ALAMEDA GOUNTY. CAL.

LARGEST STOCK ON THE PACIFIC COAST

Fruit Trees, Olives, Oranges and Lemons, Nut Trees, Wine and Table Grapes, Berry Plants, Shade Trees, Evergreens, Shrubs, Roses, Etc., Etc., Etc.

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What May Be Seen In a Packing House.

The Southern Californian, in an interest ing article on this subject, says: A visit to a raisin packing house at this season is very interesting, and much can be learned in a short time with reference to what is already a most important industry and is dostined to become of still greater importance as time goes on. When the production of raisins was first demonstrated to be a success it was customary for each owner of a vinevard to undertake the entire care of his erop-picking, curing, packing and marketing. But it did not require many years' experience to show that this method was attended by so many objectionable features that a radical change was necessary. Principal among the objections was the lack of uniformity in grading the fruit, so that in purchasing a certain brand no one had any security that the same quality would obtain throughout. Then there was great trouble in marketing the fruit. Each producer sent his crop to a commission merchant. In the rivalry of trade there was a great deal of unnecessary cutting of prices, and in many cases producers were so slow in receiving returns that they became almost discouraged. It is a fact that so great did this evil become that in some instances a second season's crop was well under way before the returns for the preceding season had been received.

But with the advent of the professional packers all this was changed. The producers contracted to deliver their fruit "in the sweat box"-that is, in a condition to be packed at once. There was no trouble about returns, for the producer received cash npon delivery. The packers adopted certain brands for the different grades, which were rigidly adhered to, so that a purchaser having once made a purchase of a thousand boxes of a particular brand was perfectly safe in ordering a thousand more, secure in the certainty of getting exactly the same quality of fruit,

A packing-house when raisins are being handled is a busy scene. The raisins are all delivered at the scales in sweat-boxes. holding 150 pounds or thereabouts. Long and broad tables reach the length of the building, by which stand or sit the packers, who are mostly women. The sweat-boxes are dumped upon these tables, and with nimble fingers the perfect bunches of fruit are sorted out for packing, while the loose raisins and stems with only a small quantity of fruit thereon, are put to one side. The raisius are carefully weighed, five pounds at a time, as each twenty-pound box is made up of four separate layers, each weighing tive pounds. The boxes are packed bottom newards; that is, a number of fine bunches are first haid into the box, with the stems unwards. The remainder of the layer is put in indiscriminately, and so on until the box is filled. When this is done the lid of the box is nailed in place. when the package is reversed and what was the bottom becomes the top. This insures the top layer being well pressed out so as to present a fine appearance when the box is opened.

But only a small proportion of the entire erop is packed on the bunch in this way By far the greater share is put up loose How to handle this fruit properly and remove the superfluous stalks and stems was for a long time a problem that received much attention, But finally an inventive

genius hit upon a plan for cleaning the fruit, which is now generally followed in all the raisin districts. The machine consists of two cylinders made of wire cloth having a mesh just small enough to preyent the raisins from passing through, One of these cylinders is stationary, but the other revolves on its axis inside the first, from which it is separated by a space of perhaps half an inch. These cylinders are linng in a frame, one end being lower than the other, and on top of them is a feedboard. The stationary cylinder has an opening about a foot square on its upper side and there is an opening in the feedboard to correspond. Into this opening the raisins are fed, while the cylinder is turned stendily by hand or steam power. The fruit passes between the two cylinders and the stems and stalks are thoroughly separated from it. The fruit passes through the lower end of the cylinder and falls into a box placed to receive it. The raisins are then fed through an ordinary fauning mill with two slides, by which all the stems are thrown to one side and the cleansed fruit is then ready for packing. When properly handled the boxes of loose misins look very tempting and bring a good price,

When it is desired to put an extra finish on the raisins an apparatus is used by which the top layer in each hox is laid in uniform rows of large and equal-sized fruit, which is flattened out so as to make it look as well as possible. This makes the boxes look almost too good to use for anything but show-and that, indeed, is the main use to which those are put which are handlid so carefully and expensively.

Every raisin grower, especially those of little experience, should pay a visit to a packing house and examine the raisins as they come in from different vineyards. He will have to be the possessor of a vast amount of experience if he does not learn some valuable lessons. Here, for instance, is a lot of fruit which is little better than trash. It has not been did d sufficiently, has been carelessly handled, and the chances are will not sell for any more than ordinary dried grapes, if for as much, By the side of these half-dried raisins is a lot that have been dried until the juice is all evaporated and they rattle like so much gravel. These will have to be sprinkled and allowed to stand for awhile before they can be packed. Here is another lot which was not protected from the dust in hauling, and as a consequence they are dirty and gritty, and while first-class in other respects, still they will not grade nor sell as well as if the small care of covering them when hauling had been taken. The fact is, the raisin business is one of detail. Each little important point must be borne in mind and receive the requisite attention The greatest care may be taken, but if one little precuntion is neglected, all the previous diligence will be of little avail. And nowhere can the importance of care be learned so well as by a visit to the packing-

SORGHIM SIGAR.

there seems to be a great diversity of opinion in regard to the manufacture of soughum sugar, says the Grocers' Criterion, some people claiming that it cannot be made profitable, others that there is money in it. Experiments have thus far been successful in everything but from a financial standpoint. Perhaps some new process may be invented, or some cane discov ered richer in saccharine qualities than that but there are many other well-known fold in value!

ducers to make it at a cost that will be satisfactory to them,

The quality of sugar made from sorghum s excellent. Some time since a gentleman connected with the plant at Sterling, Kas,, sent us a tub of granulated sugar which we found to be excellent. It was very pleasant to the taste, being sweeter and more palatalle than the sugar that comes from the Eastern refineries. It made a clear and delicions syrup, which was much relished upon our table by our own family. There seems to be nothing in it wanting to give satisfaction for all domestic purposes. With it griddle cakes are very palatable, and for pies it proved to be very satisfactory. We can, therefore, very warmly rec ommend it on its merits as sugar, and we see no reason, except that of expense to manufacture, to prevent it being largely used throughout the country in preference to the imported article, as American methods of manufacture are known to be more cleanly than those of Demerara or of the West India Islands, where the product is principally made by Negroes and Coolies, The first plant of any size in the State of Kansas to engage in the manufacture of syrup and sugar was at Sterling, from which factory the samples came to which we have referred. This was along in 1881. Since then a considerable quantity of sorghnm has been made at this point, and recently the government contributed \$100,-000 to making further improvements and experiments. The plant is worked on what is commonly known as the diffusion process of manufacture. It consists of a battery of twelve cells run by a 25-horse power engine and a large steam pump. About 2,000 gallous of syrup a day can be manufactured with its present facilities. We hope to see the production of sorghum sugar a success, though it is claimed by some of the government experimenters, in their recent report, that it cannot be made at a profit so as to compete with the common caue syrup. Perhaps, however, the greed of the sugar trust will give sorghum a chante, as prices advance it will give a large profit to those who are engaged in the manufacture. Some sections of Kansas are particularly well adapted to the growth of sugar cane, and could the mannfacture of sorghum sugar be made really profitable it would add millions to the agricultural interests in that section,

THE CHAMPAGNE SUPPLY.

The quantity of wine shipped or sent off from Rheims and Epernay is almost incredible, says the London Times. We hear a great deal of nonsense on this point. We are gravely told that more champague is drnuk in Russia alone than all the vine yards in France put together could supply -the fact being that it is very difficult to smuggle champagne into Russia, that every bottle pays a duty of four francs to the Russian Government, and so the precise number of bottles imported is known, and the quantity is a mere fraction of what is sent from the district. England and America are much larger consumers than Russia: the home consumption in France is large, and so is the export to Germany, Italy, India and the colonies. But the supply is equal to even larger demand. The average export from one house at Rheims, and of high-class wines alone, averages 2,000,000 bottles. No other house may have quite so large a business as this,

which has been used, that will enable pro- houses where the exports are very large, and it is a matter not of guess work, but of careful calculation, founded upon official returns and the collection of revenue, upon the manufacture of bottles, the supply of corks, railway returns, and similar facts, by which a tolerably close approximatiou to the truth may be ascertained, when it is believed that at least 20,000,000 bottles are now exported or sent from the champagne district for nome consumption every year. The quantity has tuffy doubled in the fast thirty years, or from 10,472,049 bottles in 1858-9 to 20,331,324 bottles in 1887-8, the exports having been 17,257,684 and the home consumption 3,676,631. These are the statistics furnished by the E cims chamber of commerce.

When the visitor walks around one of the vin yards which cover the slopes of the hills along the banks of the Marne, and is told that the land varies in value from 500 pounds up to 1,200 pounds an acre, that the expenses of manuring and cultivating on a yearly average amount to 35 to 45 pounds sterling; that in some years the crops are scanty or poor; that only about once in five years is the crop full and fine, and then when one reflects upon the cost of burrowing out the cellars from the solid chalk, and of the casks and vats, of the bottles, corks, and wire, of the labor in the bottling and disgorging, of the loss by bursting of bottles, of the loss of interes on capital while the wine is maturing, one wonders not that good champague, afte paying duty and carriage to England, should cost ten or twelve schillings a bottle, bu that it should have a profit to the produce even at that price. And when it is known that a really good, pure wine-not of choice or fanciful vintage and of the branof a well-known or first-classs house, but real, genuine, wholesome, pleasant winecan be supplied at a profit from Eperna and bought in London for half a crown bottle, even now that the additional five shillings is paid upon imported champagne one is lost in astonishment as to how it ca be done. Some people say it canuot b done as such cheap stuff must be a sort ginger beer or zoedone. But a visit to th champagne district dispels the doubt.

A COLONY SWINDLE.

The Chicago Tribune publishes an accon of the formation and development of wh is known there as the Chicago-Californ Park Colony. It alleges in substance th R. R. Porter, a contractor and builde originated it. He visited California as negotiated with W. B. Hayford and Manri Lobner, real estate agents at Colfax, a secured an option on 3000 acres of la near that place. This was platted in town lots at \$50 to \$75 each, and a property at \$75. The situation, clima etc., were glowingly described, and abou hundred people were induced to buy, abo \$30,000 cash being realized. A number investors claim that they have been una to secure abstracts of title to their p chases, and it appears now that land in inimediate neighborhood is selling for an acre. In the meantime, nobody see to know where Portes is.

This, the Southern Californian se should not be confounded with the Chic Colony in San Bernardino valley, which been a success from the very start, Th who bought land there have bad pleasure of seeing it advance at least fe

FRUIT REFRIGERATOR HOUSES.

A recent care for examination of the serve cipal fruit refrigerating howers along the Hudson river-writes a correspondent the America A 1 to be have 1 m aspar nt that whatever syst in fir filees tion is used, the most ongortant regard in all fruit houses state properties and actifruit itself and the pair is required the temp rature. Facility of a production which is but a slight in this ato it from the of me at refrigerators in as it can apply inis most frequently at a test, the product features consist of an ion-box arrang is above, in the center will a confine the length of the fraction on both voltage of a which is usually four partially have been sude an opening in its better than these proing is four or five just, a will ; down through the dier. Assist for it the opposit sile of the buring of the stor room allows the warm sir to rise the tight tight passed that ever a state district of ment continues that in the Levi Lagis created a current of air from the room below, where the fruit is stor if up to and over the real Tars Lasshaves very rooms with in-leave arring love on the and the ico-hous is in the rife fith building convenient to the real area. The store-recoms are until at any 1 small hight generally from eacht to twolve fiet. In most bodies the partitions of fill-born sawdust, and in a row instance Uniting paper is used to make instrukt aparts and a

The contents of many of the house the same plan say that, with proper inthey pay. A year ago list fall the change for pay all Winter -Ex. of one of the houses were a much limiteed that Concordigrapes hits to be range. CALHORNIA than one cent per pound, while this year, in the same house, but with more car po its management, the storage was say i. Pears keep gen raby well in these houses, and can be kept with print. Burtlitte wir sold, during the hearlays at from two 1. lars and a half to f ir d mars a tosk to while in their regions is a they emybrought from soventy-five contact, and marand a half. Concord gray - she uld not be kept longer than the mildle of December. as after that time they do not command prices commonwarate with the waste.

PRESERVING GRAPES.

Having provided a number of crabs, the

tests the fruit from the air. A cluster being HORTICELETIRE AS AN INDISTRAL to the second was were too which is but differenths vine, I bay it car-fully incommon of the ends, then another by its sole, at least till the bottom is covered. $\Lambda = \text{for } r$ by a sephered on the bottom layer, so the restor that and seem uptil a is file say, four or five layers. I have the crates out I, is in a ity is that the stems in shriveled that is the collar.

or is an ordinary colour-inthe three three nordity of collars. It It is very wet, the water stanling to this at his in Fall and We are but having ben drained, it is with an item for ten er twive Spanish engine and end of the County of the grapes and appear experience to the county of the grapes and appear experience to the county of spin voy 2. Leonditi nomiti Apul, for a third of a contry to opposite of the troubstant domas slavy and pro-has principles at mass contracts. three its a during a winter, and yet a run can be seed in the three maps of a long of the man way as than two tyso of a first norm out good in the Street. The Vest conditions for keeping. the graph, who the some of appears to our as a 11 as it can be, yet the constitute lange. Sand I have Find I the schor it is quite dry, and who roughly nor gropes keep so plump as fift, though they are pist as excet. At any rat, or filks and friends minage to worry there I win.

with in its the Isab Ha. The Draha keeps systematized. During the season of 1887 in the like by March is nearly worthless have been almost a total less, while the I have not been all to preserve the Conowners of other houses constructed after a rd on a decondition later than Decem-

RAISINS

Still the instance abrokers's office we found. In the northern and east runstance of the But the most important point to be call a exhibit in samples of Leiden layers only in the next into a perpetution of 4. sidered is that of grapes bringing three drift of less. Muscately three-serous raisins, people, the fruit seas relies as some or services. hading all the fruit and packing it over, wring. The Fresho fruit is tender, in this own preduction. together with the waste and thesis is a rist of fir almost of listly ar's pack, as is siderable even in the last horses it is color. It can no longer be charged that doubtful whether two or two and what Cast rule casins have not the "bloom" cents extra will warrant the Appendique, that characterizes Makaga raisins. The Down in San Diego they are making trish course and beading to make Califore fresh fruits of any kind or source iga. And this year's product shows they manner has been dimensioned is

lets of rushes in this market to give his And, by the way, whethis hat a hope opinion of the three-crown loss Califors way for the disposal of the sarp is well mir raisins before us. He sail. "They gropes which have over 15 million are extra goods and equal to four-crown this year? Toke the Bing r for each Malaga fruit. Although the market, good It is a beautil day transcor int white grap graphically consider it is against us, I ex- with very thin skin and of exactions port to a dethis year more California than sweetness. The least raction of a more bottoms and sides of which its mode of A in ar first living the raisin growers of the fruit being seesant and the see all lates, and of the cape ity of unity peachs, speak it of the American market, having terolas to be almost as all mass. The pe I select a warm, dry day, when the grapes already for althorn to diminish shipments as no hards on rigrape grown and yet \$100 mells. The current Banson are fully rips, and dip the stems for home to it their grapes into wine, a ten, or half a central point, was as to the flower intended to a section 484,080,080 fluster with a pair of shours, boing are for Every true American reports over every as could be get for those Ports, to the A sluster with a pair of shours, being are to. Every true American rejuces over every as coming gardens as the pair of shours, being are to the storage and ship them East in Promiser, particularly and an amount of handle the frint only by the storage in the manufacture of the storage and ship them East in Promiser. If the storage are the storage and ship them East in Promiser, and the storage are the storage and ship them. possible, without touching a grape. The wat r, and non-has a m-re-crohtable his- and they would solve right our re-5 resoom of the grape, which is a fine wax, tory than that of the California raisin in-cents a point, or even a research in time remember to high tiff in feet from the

From the new gorrand, to and country $m(q) = f(C) \mathcal{C} \mathcal{L} \mathcal{L}(r_{n,k}) \qquad (q) = 1/3 (2/4), \quad \forall i, i \in \mathbb{N}$ B arl of Trad , w street the f , w. on the subject of Levis other

H ricenture is rapidly b most in lastry of the state of bounds of the Listory California has although the mafactors of whole her year and it was you has from the contract taking provided to of my and young a of the some lastness. A to the experience the of I have the in the cody days. opinion firming your vacant the complete not the first of a that the and spends with the latyears the true great of Confidence to the E than 25 communers of hope vines. France have been supplied to lest reconstraints to a greater in small region to ϵ that the soft region ass ten years, but it has the post three seems that the transfer of To vice by digraph which kops best and marketing desir from a constwe's new in demonstr, but it then begins according on is. Our on from were some pole est, and found a random control in like t I'm stor rywhere in that are at only you couls country extending from the east rucing for proceed Winter -Ex. The Atlantage of the Sarra Nevel and mountains to the form it is granting of food will, at the Atlantage ast, 5000000 openies or logic it is good that no human being consum lity our causest a antition AHEAD pounds were dried, and it is a developed that fully as much more fruit was cosmic last home by the 1,250, or popular time state

a half to four centers penulat the time of the keddy A. B. Butler, Fresno, California months, while in California it common is harvesting, we cannot so what profit to for the sumples from other vineyards, with April and continues to the only forth latter near profitable. Within the is in six conts after being stird. If we show he very decided advance over last sea.

Now independent to the only forth latter near profitable. Within the is in six conts after being stird. If we show he very decided advance over last sea. calculate the cost of the mean, he and some fruit, giving evidence that packers these 4 consequent people with fresh fruit in other appurtenant s, and the lift r for rs have much improved their knowledge of four months while they have none of their position, and their ir many it present

GRAPES IN COLD STORAGE

There is this compensation, however, that they reservations. The packers of Californ of the collestorage processing relating to if a considerable equating of grap and has been great praise for the persistent serve grap a until such time is they may be stored, it makes the market " it of other, maintrin which they have fought to place, shopp I East, so as to take advantage of who sell as seen as the organization of their principle and alongside of Maiaga fruit, the high prices that are sur-regional and, having reached that point, for taking about the holinay's is on and let reached am rusins grade able to like marks of Male feasibility of prisorong gody's politics have in the. We requested one of the that it has long sine pass iff in the laif stands experienced and largest hands main of experiment mental that if a ready Malaga raising. Well done, California being often a fortor more in laugh and and by no means be rubbed aff, as it proved istry. A second reserved York operated Malagas. And this is not the only all a

arteriol no. The cost f for the nebroll strage is so the short to prothet they always of by broad that it sooms between the total legislation int the second is with a major state before

CLICITALE THE BETEBERRY.

to soft of parameters - rary that have not A teatron, M. Eller to tim when the The control of the company of the control of the co State of the wheel bear confidence from soil and the reis the tother to borns which now the transfer Both Lakeberry we who to see which take I the constraint the world multi-improve this terry to r lasfrance lands a tibe dies to best reside. It is the Art. But marly disturplaces and from two manually or the of more kind is to be post for comment. But for counterations man has been improving that worth of more especially the comes and fruits in which has now lives. In the many point airs fruits have been any deprinciple, a marbility, owing to office bits a what fruits and the same, drivbat they are. There the exact think that this process is to lithed there is well be turned. to in points, and they, by selentific will viril fisharvation.

Don't Dig Up the Vines.

There are reports of vineyardists digguezo up their grap views, electron the if returning to gran-farming, believing the left romer profitable. Within the don't not by a day form its as wholly unshara I be at which tries who assert, with roll rosen that they cannot make on the seal West gong is an inling low this se is a, but it I is not follow that this will always to the case of the fit is as probthe the 1 mind for grapes will increase - Charles and old a market for the inthis light had not suppose that the growing to raisement be overlose. It is a stourch of the vineyards of the State time have granefully there is little I do namy to ficers, in a short time, a said but constants for regrit the change.

lie ext me star what make by John Acts in show that the outside air after a sort out outline 1 521 (1) dust particles of the arms for weather main 1 2,11 % or part 1 s in the same and the action of the state of ith the sphere. The sir far on was infit con littlem partiles sice that has the oning that is it is particulate the cubic



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Raisin-grape grow is in Easth rue valey are realizing from \$100 to \$200 an acre this year from their viney ards.

Such are some of the items, all will anthenticated, which are being publish d concerning one of the foremost industries of this county. Rightly mough San Bernardino claims to be the piene r in the productions of raisins in California. It is now eighteen years since the pioneers who had the hardshood to settle upon the barren plains of Riverside began planting vineyards of the raisin grape. The first efforts at producing raisins were far from satisfactory. Everything had to be learned from experience, and many of the bissons were dearly bought. Some became discouraged and dag up their vines, but the greater number persevered, and the result is seen to-day in the production of hundreds of thousands of boxes annually of as fine raisins as are found in the markets of the world.

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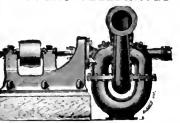
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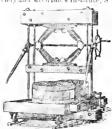
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 SATURDAY, JAN, 5t

 ARABIC
 THURSDAY, JAN 24t

 O-FANIC
 WEINESDAY, FEB 13t

 GAELIC
 SATURDAY, MAR 2bt

 BELGIC
 THURSDAY, MAR. 2ct

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VITICULTURAL PAPER IN THE STATE.

Devoted to Viticulture, Olive Culture, and other Productions, Manufactures and Commerce of the Pacific Coast.

Vol. XXI, No. 5.

SAN FRANCISCO, NOVEMBER 23, 1888.

PRICE 45 CENTS

GRAFTING TO MUSCATS.

Prominent Grape Growers of Cali forms, Who Have Tested this Method Report Flier Experience.

The following circular and questions explain the objects of this publication:

STATE OF CALIFORNIA BOARD OF STATE VITICULTURAL COMMISSIONERS, OLDER OF THE CHIEF EXECUTIVE VILLE AND ALL OFFICER.

SAN FRANCISCO, August 15, 1888.

Dear Sir During the next spring, mat y grape growers who have in the post cuits vated grapes for wife making will graft their vines into Museats for rusin-making purposes. From these who will make this change there have come to me numerous inquiries as to the suitability of ordinary varieties for such grafting.

The experiences of the past on the subject are somewhat conflicting, but, knowing there have been trials chough already made with this grafting to determine its value, if the results were but known, I am and avering to collect them for the instruction of the public.

Believing you may be able to assist inwith your knowledge or experience. I have taken the liberty of addressing to you the following questions, which you will please answer by mail at your earliest covenience.

under the head of "R marks," whatever Muscats on to other stocks.

Very Respectfully,

J. H. Wheeler.

Chief Executive Viticultural Officer

The questions were as follows

- 1. Have you ever grafted Muscats into roots of other varieties, and if so, what were the other varieties?
- 2. When was your grafting done year and month?
- 3. About what properties of the serious grew?
- 4. Do they now appear as healthy as do Muscats on their own roots?
- 5. Does the finit set well and rip n equal to that of M iscats on their covernosts.
- 6. Would your experience lead you to \$1,000 yines, partite White Control

Avis others to employ this in the conrifer to poling up the olivin st plant Mascaticatings?

7. Remarks

portioned in may, however, were kindle to ach. to write in their spinious for which I

That soboted from the money roused, the following, which has their cald he I as much as some consist with char expression.

To indicate the quistions all a their numbers are empty 1.

in in stany kind of relast grower, if Museuts are desired,

Varying throughout, twenty years past Good results gin rully, but followed by knetty accrutions on rolls, 4, A since percent 5. Think it is not segon 1 at ould bet graft oul stock, would graft stock on a tive or through are dela-

 $J, \, \psi, \, M = \nu \approx \psi \, \psi \, \chi^{-1/2} = -1 \, . \label{eq:Jacobs}$ in Equated Missats onto Trissia; 24 March, 1887 3 Ninety-rane per cent. idvise grafting.

 $W, E \leftarrow B$ 3. Eighty-five per cut, A. Probi. Per J. W. Pewers Software Greath of the If unable to answer these questions from ter wood than Miss at roots to the years, finites and of diestodies. your own experience, will you kindly note, the heavest bearing Muscats I have every the property of the Revenue of the Have soon, 6, Yes, 7, The Mission is preinformation you may have received from ferred for this grafting been at hist others regarding the success of grafting stands the summer had and is a strong who had be with a well a ne-

> n Charbeno (2) March, 1888 (3) Nucley on proving now per cont. A. They consequently well, 5, Cannot yet determine. should girll by all mans, 7, 1 mm. you can graft any on as it can be found in f. in the worm is will burry in ancies as kr wperfectly.

J = A - b = 1. have, but we have united there was his on Moscats, which had not prospecies. Wood advis . . . dil onto other sterks.

W. A Sples > Yes 2 Pelmants 1 Tree 1 1 .

187 17 7 A considerable number of the vanigrous smoot becomes, such as an id-to-consis-Alressed were unable to report my to and similaring Och stimules decay and be-

> The third is a second of the s r to L. Ye, art Research Hammers, Research than their shorm controls of a lothers of March and April, 1887 and photons a book of the re-Nat typer and 1887, saving broth to eachty per east in 1888. 4. They year, 7. A fresh bords in the Massimir to 5 ($\rm V/s$ on the Massats fifted years 10^{12} a Miss, a day, 7. Hay graft i Soliess Start and Zont Corrects in Mission.

The Working mover 2.1 / Zentands 4. Ingood rd t. 5. The same, 6. I would grafted Massas on starr is, but have not riturn in this sound to a charlet is R' rit 1. expect out apperently with some say comprove, grift and Mirch d 300 Mission into Masouts, 2, 1978, Call rights has craft but Zantan bl.

> Leated Massets out (Zodandell, 2). Febrang and March, 1889, 7/8. (4) All grew on Zinfan let (6) all stronger than on their ears roots. To which to be whom toput upons only and Forenseas as thought lity awant a

Upon I say mat Many ist.

end of the second of the best and the $M:=\#_{\mathcal{H}_{\lambda}} = \#_{\mathcal{H}_{\lambda}}$ 61 M -

W 14. 1. Grafted buts in 1887. Non-tyand how head from today with Mee.

> evit arguay , 2 T mar. on Hamburgs Y - on the Hand argued B so P . i. Sorwan to Campber and Zonta della about water out the title that the west

to I draw EM -1554 and 1555 The Missi is to ; Mission

good stand. 4. They are more thrifty, longer canes and more foliage than Muscats on their own roots, 5. Fruit sets and ripens well and the grafts yield better crops in every respect than Muscats on their own roots. 6, Graft instead of pulling up, for if well done, the grafts will yield more second year than vines five or six years planted.

Chas, Wilkinson, Etiwanda,-1. Grafted Muscata onto Mission, Tokay, Seedless Sultana, Rose Pern, Zinfandel, Malaga. 2. March, 1887. 3. 95 per ceat. 4. Grow well on all these varieties, as strong as on their own roots. 5. Bore 3 to 5 lbs, for graft this year; clusters large and good as those on 5 year old Muscats. 6. Would for express purpose of grafting to Muscats

H. Dugdale, Etheranda,-1. Yes, on Mission and Zinfandel, 2. Early in March, 1887, 3, 75 per cent. 4, More healthy 5. Equally as well. 6. Would advise it by all means. 7. All vine grapes may be so grafted. To graft successfully, remove he earth deep about the stock, saw off beneath bads or sprouts; split with chisel and mallet. Scion 6 inches long, wedge-shaped to fit the split where opened. Make bark even on outside; wrap with striped cloth to keep dirt out, then fill up hole with earth

 $C, \ \theta, \ Tucker, \ San \ Diego \ County. = 1.$ Grafted onto 20 other varieties, principally Mission, Blk Hamburg, Rose Peru, S. Chasalas and Zinfandel. 2. March, 1880; March and April, 1881; April, 1882; May, 1883, and May, 1884. 3. In 1880, on Mission roots, 98 per cent.; 1881 on same, 93 per cent; 1882, on a variety of roots, 80 per cent, 1883, on same, 76 per cent; 1883, same 81 per cent; 1884, same, 60 per cent; 4. On Mission, Rose of Peru and Black Ham. burg, yes; on other varieties except Zin. fandel, no; On Zinfandel, more healthy, but don't set fruit so well as on their own roots, 5. On Mission and Black Hamburg, fruit sets better than Muscats on their own roots; on Rose of Pern, don't set as well, and suffer from coulure; on Zinfandel, don't set well but ripen well, on other varieties, no 6. With Mission, Black Hamburg, Rose of Peru and Zinfaudel, yes; other varieties I have tried, no. 7. Prefer common cleft graft, 8 inches deep on old stocks; 2 or 3 inches on young stocks. I employ with best results a wax, 1 part beeswax, 2 parts resia, 3 parts tallow. Had most failures where I used equal parts clay and cow-dung. Graft in cloudy weather. For scions use faterals. Would not graft on Pineon, Chasselas, Riesling, Tokay or Sanvignon, Employ no man or billions temperament.

Geo. II. Craft, Redlands (for others)-Grafted miscellaneous varieties to Muscats; results always satisfactory.

G. F. Merriam, Escondido - 1. Have grafted twenty-four vines to Muscats, viz: Rose of Peru, Black Morocco, Mission and others. 2, March 20 to April 10, 1883, 3. All, 4. Yes. 5. Yes, so far as I see 6. Yes. 7. Where I used common cleft graft most of scions grew, but one year I used Dr. Congar's machine and lost over half. Do not let any one use the machine. Raisin growing in this locality is very unsatisfactory.

J. J. Stephens, Madison - 1. Yes, have grafted into Mission stock. 2. March, 1872. 3. Ninety-four per cent. 4. Yes, more vigorous. 5. A great deal better. 6. Yes, with us Muscats do better on Mission roots than on their own.

John Hall, Riverside-1. Yes into Mission, 2, March and April, 1879 and 1880, 3. Ninety per cent. 4. Yes. 5. Yes. For a whole vinevard would advise planting Muscats, but for occasional Missions or other varieties would graft.

E. Z. Clanton, Woodland-1. Yes, onto Mission, Hamburg and Tokays, 2, December, 1886, 1887. 3. Ninety-nine per cent. 1. They look healthier, 5. Yes. 6. By all means, 7. Have had grafts bear the first year; they bear well the second year. Have had difficulty in getting cuttings to grow when old vines were pulled up; lost fifty per cent.

J. M. Ashell, Milleville, Shasta Co .. I. I have grafted Muscats onto Mission roots graft every time. 7. I have planted Peru three and four years old. 2. 1869 and 1870, 3, Ninety percent. 4. About the the same, 5. They set fruit well and ripen fruit equal to Muscats on their own roots, 6, Would advise grafting as it loses no more time than one year.

> Geo. W. Applicate, Applicate-1, Grafted onto Mission roots, 2, March, 1880, 3, Used cleft graft and scarcely scored a missusing. 2. Scions to the vine. 4. Yes. 5. Yes. 6. Yes you secure by grafting an enormous growth the first year, and the second year a crop of fruit; the only diffionly is that of suckering. 7. Used cleft graft; two scions to cach subject spreading the vine with a wedge to jusert the scions, used clay as a mastic. Would graft any kind rather than pull them up as they bear grapes first year.

> H. Goepper, Santa Ana (for his neighbors.)-Grafted onto Missions, 2. At different periods, but with best success at time buds were about to open. 3. Eighty per cent. 6. It would.

> A. J. F. Whittiouse, Fresno-1. Yes, onto Zinfandels. 2. Latter part of March, 1887 and 1888, 3. Seventy-five per cent in 1887. Forty per cent in 1888. 4. Yes. 5. Yes. 6. Yes. 7. If grafting in alkali lands would cover union with gratting wax, as I found many stumps rotten and scious dead

> C. K. Kirby, Fowler Station - 1. Yes, onto Trousseau. 2. March, 1888. 3. Ninety per cent. 4. They do. 5. Not yet crop enough to tell.

Chas. McLaughlin, Fowler (per Kirby)-1. Grafted onto Mission, Feber Szagos, Zinfandel and S. Sultanas. 2, 1887, Find Zinfandel and Feher Szagos best stock to graft on, and Muscats do better on Mission and Seedless Sultanas than they do on their own roots. If desiring a Muscat vineyard would plant strong, growing roots, and graft Muscats onto them. Other experiences in this section confirm the above

C. O. Rust, Anaheim-1. Grafted onto 100 Zinfandel, 2, March 1882, Eighty to ninety per cent. 4. Yes. Yes, 6. Would advise grafting in preference to pulling up, provided the vines are not too old and in good shape.

C. M. Silva and Son, Newcastle-1. Yes, principally into Mission. 2. March, year forgotten, 3. Ninety-five per cent. 4. Yes; if not better-growth is stronger, but soil may be better. 5. Yes, 6, Yes; if old stocks were perfectly healthy. 7. Grafted by digging down three or four inches below the surface of the ground, sawing stock square off, split it down with a chisel, ent the graft wedge shape, inserted one in small and two in old stocks, brought the soil up the graft, allowing one bud of the scion ex- Would not graft again,

posed. Greatest loss was by knocking out in cultivating.

H. C. Morrell, Wrights -1. Yes; onto Feher Szagos, Miller's Burgundy, Franken and Grey Riesling. 2. February, 1875. 3. Nivety-five per cent. 4. Much more so, 5, Much better. Do not coule like Muscats on their own roots, 6 Would graft on any strong grower, but not on Burgundy or Riesling, as the vine takes the habit of the old root, and the berries are then small, tough and unfit for market.

D. C. Feely, Alma - 1, On Mission, Black Hamburg and Catawba. 2. March, 1870 and 1877. 3. Ninety-five per cent 4. Yes. 5. Can notice no difference in respect to the fruit. 6. If stocks are healthy, would graft in preference to dig ging up.

I cut my scions early in January, then I dig a shallow trench on the north side of a building, or fence, by my cuttings in and cover with soil to the depth of two or three inches. I sometim s cover them over with boards to prevent the rains of winter from rotting them. A good way would be to put the scions in a cellar and cover with sand The buds should be kept in a dormant stat until the grafting is done. The best time to graft is when a flow of sap is moving to swell the bids and bring forth the leaves on the vines in early spring. This may oc cur earlier in some localities than in others but as a role March is the best time to do

N. D. Harwood, (by C. A. McDougall) Escondido — 1. Yes; on Mission, Hamburg, Rose of Peru, Tokay Tokay and some others. 2. February 1880, '81, '82, 3. Ninety-five per cent, 4, Yes, 5. The size and quality of fruit is improved. 6. If roots are healthy, by all means graft them and secure fruit from the start. Have tried grafting by cutting outo side of the stump with a chisel-but the grafts fare like the "Titman pig."

B. P. Mackoon, El Cajon-1. Yes: Mission, Zinfandel, Blanc Elbe, Verdal, Sweetwater-first three chiefly. 2, February and March 1885-6-7-8. 3, Ninety per cent. Where great care was used all grew. 4. Yes; many of the strongest vines in the vineyard are those grafted on other roots. 5. Fruit sets equally well the first and second year of bearing the frnit ripens a little later. 6. "A thous and times, yes,"

Estate Geo. A. Cowles (by B. P. Mackoon, Supt., El Cajon)—The experience on my own place answers for this as confirmed by the foreman who was on the Cowles place when the grafting was done. Where the graft did not grow or where injured by accident we have dug a little lower and cut off and grafted the old stock snew the next year with just as good results as in first grafting.

A. F. Anderson, Black's Station, Yolo Co.-1. Yes; onto Mission. 2. When buds were swelling and just before they put forth in 1873-4-5. 3. Ninety per cent. 4. I think they do. 5. Fully as well. 6. Would graft, as fruit comes two or three vears sooner.

-Anaheim-1. Have grafted Muscats onto several varieties, with best results on Mission roots. 2. Last of February and fore part of March, 3. Ninety-eight per cent. 5. The fruit sets fully as around them, pressing it carefully around well as Muscats on their own roots, 6,

T. F. Miller, El Cojon (for a neighbor)-1. The general appearance of the grafts the first year was good, and they appear as healthy as Muscats on their own roots, 1 would graft in preference to pulling up old

Wm, C, Walsh, Escondido-1. Onto Mission and Rupestris. 2 March, 1886. 3. 100 per cent. 4. Yes 5. Equally as well. 6. Would graft in ord r to secure a large grape and large bunch. 7. Have had twenty years experience in this work. I put two scions in a stock of one inch or more diameter, which is split with a chisel or sharp hatchet. I cross scious on the liber or inner bark-just the least particleand put a piece of folded paper between the scions on the crown of the stock to keep the soil out, and if both grow, destroy the weaker scion.

J. H. Harland, Woodland-1. Mission. 2. March, 1887. 3. Eighty per cent (grafting done by inexp rienced hands). 1. Yes, and fare better, 5, Yes, 6 Yes would graft on any strong grower to secure fruit sooner and a better stock.

H. Davenhill, Fresno-1. Have grafted Muscuts onto Malagas, Feher Szagos, Mission and Rose of Peru. 2. March (early), 1887, 3. Seventy-five per cent. 4. Yes he most of them. 5. Fruit sets well, bunches good and ripens equal to Muscats on their own roots, 6. Decidedly so without any doubt, 7. The year I grafted I gathered fruit, very fine bunches, mostly second crop. This year I gathered about twenty-five pounds from each vine, first

Levi Chase, San Diego-1. My foreman grafted Muscats on white wine grape, name unknown, 2. March, 1888, 3, Nincty per cent. 4. They appear perfectly healthy and made this summer an extraordinary growth. 5. But few small bunches set on their this season. 6. I think it a success and shall graft more next spring, 7. The old stocks are cut off below ground, and a hole bored into it with a lit. The graft is then fitted snugly into it and covered with earth except one bud,

CONCLUSIONS.

From the above it may be safely inferred that with the exercise of proper care in the operations of grafting the Muscat forms no exception to the general rule, viz: that the placing of any variety on a stronger root than its own will produce better results than will the same variety on its own root,

Of the total number of experiences reported above, forty-eight in all, we find but five where the writer unqualifiedly would not advise grafting other varieties to Muscats in preference to pulling up the old roots and planting anew. Four would advise grafting only under certain favorable conditions. While many of the large majority who advocate this method speak enthnsiastically of their success. I should venture the opinion that, if those who might object to grafting instead of replanting, were called upon to make cuttings or even roots grow in land which had been drawn upon for many years by old wines, they would find the undertaking far more serious than they might ut first suppose. Let no person believe that the young vines will grow in the exhausted soil of an old vineyard as they would in new ground.

Many vineyardists advocate the planting of such strong growers as the Rose of Pern, for the express purpose of grafting to Muscats, and this, too, after many years of experience in the matter. Few would wish to

has also proved satisfactory.

The conclusions shown in the above auresult. They prove plantly that these who led the Board. contemplate the graphics of Mar its advanta or table grapes to by older applicate sign in the word of skings

Incident to the results here named, there tailiornia Brauty the only Genuine has appeared with these reports other timportant information, so in unifor the sixth head "R marks"

Grafting by machine has proved unrefiable, and growers are wormed against their use, notwithstanding they may, on ortain necesions, have provid satisfactory when oper its 1 by their investing L. Chase, of San Diego, d scrib s a method which has been before unsuccessfully employed by others, and which in the hands of his foreman has succeed d admirably; but I should eastern others about adopting these novelties for work on a large scale, as a long and d ar experience has proved that for general unity, the wedge graft is surest. and best.

Several of my correspondents have favvored me with particulars as to the in thod mployed in their work. S worshof these I have given in full-particularly if their results proved favorable, there by confirming their methods. For instance, see report of Wm. C. Walsh and H. Davenhill,

Many dispute the value of applying any mastic or way to the point of union My own experience bads me to conclude that it is wholly unnecessary. Many successes are recorded where not even clay has been used, simply piling up the loose dirt about the graft. If, how ver, mything is to be employed, clay is the best

It may be concluded that it is safest to tie in the grift. For this purpose strips torn out of cheap cotton cloth, or raphia. which is sold by some of our seedsman, answers the purpose

Some of the above writers lament their loss by knocking out the graft in cultivating, etc., and by examining their work we find that they fulled to tie in the scions as they should have done.

Too much emphasis cannot be given to the value of properly caring for the wood to be used for scious, which should be enttings, or, better still, whole canes as praised from the vine. From these the operator may in the spring cut small or large scrous, long or short, wisting no bals. These should be imbedded, when taken from the vine, on the north side of some building in trenches cover d web with earth. For this purpose they may be used into bundles or left loose. Do not be afraid that they will rot. A little monid on them would prove no injury.

Where, for any cases, the grafts fail to that the same subjects may be grafted again. the first grafting.

stood that this work is not offered as one wiser to direct our efforts toward scoring a brandy" that sells at who body for \$2.50 have done sever within the sells.

Burgundies, so that the objection to them as sing, that has acreally been given to the mount into "the clouds" in any vary the spirits X : 2 "artire as the Mission and table grapes form the favored by me some years since, middled "Dutt". In the mind of these who know, there is maxture list little stocks, and have afford dus the greatest out Methods of Grafting the Vine" and not the slight stope stron that the great max braining for \$120.

OLR NATIVE WINES

Brant on the American Market

Americans proverbally want the best the earth affords, no matter where probabed, It our patriotism is both, on the one hand to patronize other countries for articles which our own does not produce in equala lience, by helping to creat, an Amerie.c. market for the scarticles, on the other hand, we aid in spreading throughout the world the r putation of Am rica for bistand wealth, and so in another was sustain our country. But there seems to exist what might almost be called a public halluemation with regard to this matter. Every. thing for ign, good, bad or indifferent, is agerly sought after and hungrily snapped up, irrespective of its intrinsic worth. The label "imported" throws a sort of halo round goods, or serves as a kind of magnet. The mere fact of being, or being supposed to be, foreign is often the best advertise ment that an article can have. Dalers, of turning it to their own advantage. The consequence is, the market becomes flooded with cheap and imperfect imitations of forign wares, which are manufactured in this country, and are "imported" only in name, These seem to find as ready a sale, however as the genuine goods. The highest grade of customers, to be sure, cannot be deceived, unless, perhaps, in the case of a very limited number of "lines." The great army of purchasers, however, often choose an inferior article represented to have comfrom abroad, when, if it were acknowledged to have been produced in this country, they would have no desire for it. They often pay a higher price for a poor "imported" than for a good confessedly native commodity. If dealers in their action are not strictly how st, th y, perhaps, only follow the dictates of average human nature.

Perhaps in no instance is the public projudice for foreign wares taken advantage of to so great an extent as in the case of wines and liquors. Here, before geing inriber, it is well to say that every wise man must grately depricate the abuse of intoxicating beverages. It has been, and is, one of the worst curses of humanity, For all that, their beneficial medicinal, some and directic effects, produced by modrate use, must in fairness be recognized. Whether the attempts at utter prohibition and tree to make the best of it as it is, If you wish to secure the full advantage either legal or moral, will ever totally a limit purind quoted, in the rest of Hy perts wheeven it in view is the full advantage either legal or moral, will ever totally a limit purind quoted, in the rest of Hy perts wheeven it in view is the full advantage either legal or moral, will ever totally a limit of the strong plant onto which the Moscot limits the rest of the strong plant onto which the Moscot limits the rest of the strong plant onto which the Moscot limits the rest of the strong plant onto which the Moscot limits the rest of the strong plant onto which the Moscot limits the rest of the strong plant onto which the Moscot limits the rest of the strong plant onto which the Moscot limits the rest of the strong plant onto which the Moscot limits the rest of the strong plant onto which the Moscot limits the rest of the strong plant onto the strong plant onto the rest of the strong plant onto the of the strong plant onto which the Moscat banish the use of artificial stimulatism, which is received obtained the receipt in the receipt in the respective of the strong plant onto which the Moscat banish the use of artificial stimulatism, which has received obtained the receipt in the receipt in the respective of the receipt in the r

graft such varieties as Rieslings, Pinets, or furnishing complete instructions for graft- temp rate and reasonable use of it, than to pergall at Contract Co

number of examples, though the Zinfandel forming Appendix III., to the R part of (parity of so-called foreign wines and input) are the ingredients of different values of the ingredients of the control the Chief Executive Officer. This work a imported from the famous wine-growing two grades, the encel of was copiously illustrated and copies may histness of Europe," as is so often imagina in his percept of spines N swers need no comment as to the general yet be had by applying to the Scretary scrively asserted of them, are neither more spirits, prone process. nor less than base conterfeits. A very little prayre of the return more ansideration will convince even the order run, give run or lenary reader, who has given no specify its. Physicies $(x,y) \in \mathbb{N}$ tentron to the subject, that this must be see stimulants (x(t), y(t)Tak , for instance, the one case of what is expressed up. () sollivishly soll in this country under the lafew of them inserting name of champaine. Who rever hippors are for the reason that they man here, be it in polatial bot is, backs purest. Certinaly and county tarverns, or the chespest of drinks mature of the lattic will be ing saleons, one is quite certain to be able for recommending at (2) a [4] tound a bottle or same thing which pass so ther formula for Frontie. for champagne. In point of fact, France sells for \$4.25 per sellen los not turn out such an amount of gone. Frouch brandy, tannin, process. the champague in years, and it has to supply the entre acid syrup better other countries beside this. As for reognae, ' so-calls I, it can be bought anywhere from N w H ampshire to Arizona, yet their " best French brandy and water," the following facts must interest. It takes the proper alcohire standard to distill one gallon of brandy, and in France one gallon if wine of the requisite standard) is worth more than on-fifth of a gallon of brandy. Now, it is p recetly chair that nobody in Prince is going to be so though as to pay course, note this fact, and are not slow in distillation expenses in addition to the cost of the wine, and then be left with an article on his hands which is worth in the market less than the wine was in the first place States a popular journal, A wealthy American, whose father was a Frenchman, and who has for 25 years resided by turns in France and this country, recently said "No genuine brandy is now made in France. In the famous brandy districts the grape vines. have all been destroyed by insects, and the land is planted with beets, potatoes, and such segetables as will produce the greatest amount of spirits. This is not guess work, for I came from there not 30 day ago, and I know it because I saw it ". There is no difficult in obtaining in this country other purports to be specimens of brands of foreign wines and liquors, which are produced only in very small amounts, and are exclusively controlled by European magnates, and of which, practically, a bottle never lands on our shores.

This fact is recommended to the attention of those who fancy they are drinking Chan. teau Lafitte Johannisberger, Clos Vangeet, etc. H manufacturers and dealers pretend: to furnish these beverages, while in reality what they furnish are simply imitations and impurious. abilitrations, it can only because of a Those who will as all has standards for the m. The public want, or think they American wines and high is the have affected any gain is a question. A impossible to obtain, so that to some, at pronounceable names. Right har other, grow the first year, experience indicates practical man, who sets the world as it is, least to supply the humand, manufacturers are many bey races as a disch and dearers take a native product is a base much lower prices. It is a fact and a the following August, using for secons cut (authority esting effort in striving to turn it and "fix" or "doctor" it to initiate the line (is being product I in these entry to 1 or

move all roots proceeding from the seion goes to show that alcohol in some shape is the directory as an compensar? Of the Ear que You land the wall was In concluding this injury, let it be under- practically a necessity to the rice, is it not following ingredients be makes. French the wine. You will be not at 1 w.

and, spirits. Here I've a boundy, a portion of about on the last us has the base. More fithe pur article is all fito France no long r produces cognace. Those make still a higher set ortally H with its who take such supreme satisfaction over key is made is not reduced in a manifest turer" has the tell-ying man bents Proof spirits No. 2 high wing water, time slightly upward of five gillous of wine of him, oil of pum nto, ook spines beyonether, head oil to suit. Busile there is the ents given in the foregoing form, . . . the manufacturer occusion by us a suphanse acid, and very oft in he alls to his theompounds" one or more of the following Oil of almonds, all of mark, mays, present snake root, flaxs od, flour, outmoit, homey or rice flour. To age a liquor, the mains said to be employed as slipp by concer baster almonds, while to import a roughn is and astrigency, beside tentan, person and oak, alum and catcha are us it. I'm coloring purpose, red solders and Look bark, logar of, saffron, in high or want of, Brazil wood, red beet and alkanet well arcalled into service. Some of the emgredients are practically harmbas, others certainly are not. Such mixtures one knowingly would not care to take into his stomach if he had any respect for that organ, much less would be a limitast rathem. to his child in sickness, and thanging between life and d sth.

There are, in these facts, the best orgaments in favor of temperance. But to totalism for the world some if ar off, and antiit is possible, charity prompts that the ignorant le taught box to sorp as mich as they can the dang is which ever attend the habit of tippling. Childr a most not suffer for the sins of parents. Assembly to poorer class s, other beauty or a use y is frequently administered for infability plaints. The best is habit to do an or the vile "compounts" are return to it -

determined and unistaken public demand will do will to follow this area. Drawn want, imported goods. These often it is longer any need for foreign as south untings, which have been headed in into some thing which it is not, and never period article, partially a tereign [dot] on unsertrais hall rid so greatly with all be must favor in bearing the natter of the battle cheating the purchaser into the purposes has the same chance of success as was half at the use of intoxicating drink to the individe bearing it some thing which it is not and. Twenty-five years could also so it is

That time has now substantially come. A due regard for life and health, economy, common sense, patriotism, in fact, every consideration concerned in the matter, now bids Americans drink American beverages. They are pure, they are cheap, they are are more than ordinarily scusitive to deleterious effects, they are indispensable. It is not beyond the reach of hope that in time they may become as cheap as beer.

In giving the preference to so-called foreign products, for one thing, you simply offer a premium to the dishonesty of manufacturers and dealers. At any price, certain brands of foreign wines and liquors are, as has already been stated, wholly unobtainable in this country. Some who ought to know stontly maintain that California brandy is absolutely the only genuine brand to be found on the American market, and the purity even of it may somewhat depend upon the character of the firm from whom it is ordered. So long as there is a call for any commodity that cannot be naturally met, artificial means, or in other words, fraudulent imitations, will be employed to meet it. While there continues in this country a demand for foreign wines and liquors which cannot possibly be filled in a legitimate way, people will simbly be put off and cheated, and their constitutions injured with "doctored" adulterations .-Sundag Herald, Washington, D. C.

APPLE TREE BORERS

Some Pacts About These Insects and How to Destroy Them.

A recent bulletin issued by the Ohio Agricultural Station has the following information given in reference concerning the round-headed apple-tree borer:

The beetle is easily recognized by the brown color of its body and the two conspicnous longitudinal whitish stripes along its back. It appears early in the summer and deposits its eggs on the tree tranks, in or under the bark, within a few inches of the ground, frequently placing them just above the soil surface, or even below it where the ground is cracked open so that the beetle can descend without difficulty, The insect makes a slit like an opening in the bark, into which the egg is pushed. A few days later the egg hatches into larva, or grub, which gnaws its way into the inner bark, or sapwood, where it continues to feed throughout the season.

As winter approaches it frequently burrows downward below the surface of the ground and rests there until spring, when it again works upward and gnaws the inner bark and sapwood as before. It rests again the following winter, and in spring gnaws its way deeper into the body of the trunk, cutting cylindrical channels in every direction. Late in summer it bores upward and outward to the bark, lining a cavity at the end of its burrow with dustlike casting, and there rests until spring, when it changes to the dormant chrysalias state. The adult beetle emerges from the chrysalias about a fortnight later, eats a hole through the bark with its strong jaws, and, comes forth to continue the propagation of the species. Thus three years are required for the development of the insect. The place where the larva enteres may frequently be detected, especially in young trees, by the sawdust-like castings that are pushed out. They also may often be seen, and are easily destroyed by pressing on the bark sur-

other similar instrument. The presence of the larva is shown latter by the discoloration of bark where it is at work. The full grown grub or Jarva of the round-healed borer is about an inch long, wholly without feet, whitish, with a chestnut brown head profitable. For invalids, especially, who and black jaws. The pupi or chrysalias is lighter colored than the larva, and has numerous small spin is on its back.

The flat-headed apple true borer is an insect very different both in its adult and larval states, from the one just discussed The adult beetle, instead of being cylindrical in form and brown in color, is flattened and greenish black. It appears, however, at about the same season as the other, and the life histories of the two species are in general much alike, the chief difference being that the present species requires less time to develop and attacks the tree higher np, being found all the way up the trunk and frequently in the larger branches The eggs of the insect are deposited early in the summer in the crevices and nuder the scales of the bark, being fastened in place by a glutinous substance. In a few the larva hatches and bor's through the bark to the sapwood, in which it cuts broad, flat channels, and sometimes completely girdles the troe. As it develops it bores further into the solid wood, and when full grown approaches the surface. ready to become a pup t it gnaws partially through the bark and then casts its last larval skin. About a fortnight later the papa changes to a beetle, which gnaws its way through the bark, and thus completes the cycle of development.

Fortunately the injuries not only of both of these borers, but also by the bark louse discussed, may be prevented by a single. easily applied remedy. It consists simply in applying late in May or early in Jyne, and again about three weeks later a strong of soft soap, to which has been added a little crude carbolic acid. This mixture may be conveniently made by mixing one quart of soft soap or about a pound of hard with two gallons of water, heating to boiling, and then adding a pint of crude carbolic acid. The solution should be thorughly applied (a scrub brush is excellent for the purpose) to the trunk and larger branches of the tree. If the bark of the tree is especially rough it should be scraped before the wash is applied, and the soil should be smoothed down about the base of the trunk, so there will be no cracks for the insects to enter to deposit their eggs. Of course, the object of this application is to prevent the laying of the eggs from which the grubs hatch. As an additional precaution, it is well to examine the trees during the late summer and early autumn months for eggs and young grubs, which are readily detected, and can be easily destroyed with a knife. In this way one man can go over an orchard of 500 or more young trees in a day.

The soap and carbolic acid wash can also be successfully used in freeing trees infested with the apple tree bark louse, whose presence is detected by the presence of minute oyster shell shaped scales on the bark of the limbs. If one of these scales be raised early in spring there will be found beneath it a mass of yellow or whitish eggs, which hatch about the middle of May into small lice, which appear as mere specks to the naked eye. These move about over the bark a few days, when they fix themselves upon it, inserting their tiny beaks far enough to reach the sap, Here they continue to increase in size, and by the end first put into it. Then the fountain is rounding them with a knife blade or some of the season have secreted scaly coverings. placed upon a shaking machine and the gas which any of the world is engaged."

As has been mentioned above, the soap wash r comm and d for the prevention of borers also effectably districts this post. the mode and time of application for the two kinds of insects is the same.

WHAT PROBUBITIONISTS DRINK.

More than twenty thousand gallons of soda water are drank in New York during 1 warm day. This is the estimate of a manufacturer who turns out 8000 gallous a day, In the manufacture of soda water, as in that of ice cream, America is ahead of Europe. Across the water, they do not use the dispensing apparatus which is so common in every drug store and confectionery store here—they serve it only in bottles and siphons. The business has developed enormously within the last half century. There are now about twenty-five thousand of these "fountains," as they are termed, gushing the popular off rvescing drinks into glasses and down the thirsty throats of people in this country. This estimate is also arrived at by the manufacturer upon the basis that a trifle more than fifteen per cent, of the whole number of "fountains" manufactured are now in use. The big firm referred to has made more than 100,-000 of these fountains altogether. Twelve hundred were broken up in this factory in one year because they were found to be of au objectionable make. The present sale of this establishment is about 2500 of all kinds a year. But the output is constantly increasing. A hundred different kinds of machines are now in fashion and kept on hand, costing from \$78 to \$4200 each. good many in unique designs are built to order for customers. One sent to the Loudon Exhibition last year cost \$10,000 to make-this was the biggest thing yet attempted, and rath r astonished the eyes of the Englishmen. The name "soda" water, by the way, as is now generally known, is an entire misnomer for the effervescing drink. It was possibly given to it by some obscure manufacturer, who wanted a name of his own in the early history of the business and stuck to it. The more proper term is carbonade. Bicarbonate of soda could be used in the manufacture, but it wouldn't pay. The article as now used is simply water impregnated with carbonic acid gas-the same gas which operates in the "raising" of bread or anything of that sort. The ingredients used in generating carbonic acid gas for scda water are few and simple, and have long been standard articles in the markets of the world. The two necessary materials are a carbonate of some kind and an neid, by a union of which with the carbonate the gas is chemieally evolved. Experimentally, a great variety of acids and carbonates have been employed. For practical purposes sulphurie acid is now admittedly superior to any other, but as for the carbonate, pulverized marble, whiting and bicarbonate of soda are still competitors for favor. The gas is generated according to the American system in an apparatus for the purpose, the gas, after its evolition from the marble, being carried through three washers, where any impurities are caught off by additional chemical appliances. It is then put into the steel fountains, ready for transport, by a process especially devised to suit the exigency, The regulation-size fountain will hold fifteen galloas. Ten gallons of Croton water, which has been filtered through charcoal, sand and gravel, are

forced into it under pressure, while the shaking thoroughly impregnates the water with the gas. The fountains are made to stand a preasure of 500 pounds to the square inch, being of steel, with block tin seamless lining, but the pressure of the gas is lost 150 pounds to the inch. The marble used in the manufacture is the white snowflake, found up the Hudson, and said to be the best for the purpose, containing 99 per cent, of the carbonate of lime and magnesia. When the water is filtered as thoroughly as it is for that purpose, the produc in the fountains will keep for any length of time, and an export trade is now being built up in the article. Spain has been the firs country to make a start, and several generators and fountains have lately been sen there. One generator of the size ordinarily used here will make about 2175 gallons of gas at a charge—enough to supply 750 gal lons of water. The English system o manufacture is to store the gas in a gas ometer, and pump it into bottles when de sired for use. The largest firm of the kind in this city controls now about two hundred patents in the various departments. I manufactures not only "soda" water and all the appliances of fountains and fixture for dispensing it, but also the fruit symps boxes and other details required, even shoe ing their own horses, "Soda" water i kept on tap in the factory for the refresh ment of the hands, the same as lager bee in breweries, or ic -water in ordinary es tablishments. Between three and for hundred men are employed during the bus season, from January to July, chiefly make ing dispensing apparatus and fixtures After the Fourth, the demands of thos going into the business has been prett well supplied, and the work of the factor is cut down to the manufacture of supplito the "plant," "Soda" water is als ased about the factory premises as a fire extinguisher. The most popular flavoring for soda is the same as for ice creamvanilla-about one person in everythre calling for it. Lemon ranks next and sarsa parilla next, after which the various flavor are about on a par as to popularity. Ho soda, so-called, now so commonly supplie in winter, is merely hot wat r flavored wit the ordinary syraps. A special fountain supplied for dispensing this from the ordin ary apparatus. The ordinary purchaser of five-cent glasses of soda water does no realize that he is giving about tw hundred and fifty per cent to the dealer .-

RICE CULTURE IN GALIFORNIA,

Last spring L. F. Moulton planted som Carolina rice on some low land on Buti creek. He regards the experiment as success, says the Colusa Sun: "M Moulton has some 6,000 acres of land sni able for rice. The Crocker estate has 1,00 or more acres adapted to the same. Eug neers Grunsky and Wilkinson, the latter of the Southern Pacific, will visit the Day Slough, opposite Princetowa, and make plans and estimates of a head-gate. Water cgn be taken through this natural outle several feet below low water, and will cove all the land above named. The water no standing in the lake into which Butte cree flows is ten feet above the water now in th river, and a short caual will take it or near Butte Slough. So there is a complete system for rice-growing. In a few year we hope to see land now called waste put one of the most profitable industries i

OUR RAISINS ABROAD

fancy, that the people take everything and matter of fact. Ther are approits, to eurpris s. The time was whom he was widevote much time to the discussion of the fact that a carbool forch whipe he is he been sent across the Continent to taskle to palates of the East i. rs. | N with virily no attention to the forwarding of a Ab b | he is in cases where it does not require trainload of fruit, and when, a f w w kwere sent to London, but very f wip roots thought it was worth while incuts time. They see and to t ke it for granted that the world's metropells, had always bought ber raising here, and would always to then to do so.

That shipment was, in fact, on of the greatest by into in the history of Calif ratio next to the discovery of gold. The raising were considered equal, if not superior, t the best Malaga layers, and brought for better prices, and since that first it was sent across the shippers have received large orders from the bading Eur peak ties

At the first blash, it so me is redical as wastwork brooth to talk of California or owing and caring raisins as successfully as been conducted for ag s, and has been to grapes. It would at first be contended that American products. we neither had the soil nor climate suitable referred to.

tour through Europe he contributed a series want any others. same light as Mr. Lubin, and will make an completing the final details. great city.

ing the people. That is what rack-renting, was invented for. The farmers orchard-Fruit-growing in California-says the lists and vineyardists, toil year in and year Sacramento Bersshes come to be such a sur, and the longer they toil the perfer great industry, although it is yet in its in- all y g to The built of their earnings sugpart the roydry, and the owners fith find declinatings to wax fat. With our syst mes of 'mid-hollings, giving every tack." the right to win and makings in direct to as-The salin test, and our god was a sale mportary by light through we construct only my to with but outself the fireign pri very great and but or series of manipula since, three earlieds of California rusting to us. If that on the argument is cornect, min, d. Mr. E. San, there is no russ n why Confirms should not become the gr at stomping at the world. If this law is in errect, then we would are this have to a checkmated by the Spaniard and the Itaria, not alone from having sty of the , reducts ever and in Eurip , except as in sites but we would have been unable have - II a p and of them at a high Then the Spanish and Italian voud hav - liber products here, could they have dute so, and the result would Lay born that home porchards and vincverlaw unliker from in existence, except er groch fruits for mano diate consumption.

If we have an edvantage in a single cas. fig. is, the same advantage is inherent the old countries, where the industry has it a bundred or a th usand cases, and this with advantage will account to California existence. It does not seem possible to the land no king and no standing army average person—or it would not seem possible and American head and American means have

Mr. Lutin said that if the Board of Trad-

cannot be anything but a success. The shortly. The epinion of the Committee Median I were it is greated that has merit scheme has so far developed that the State was that the plan was entirely practicable, particles into a leaving a leaving a leaving to

Mr. Lubin, the enormous expenses of the Paris, Movies, with the intention of laying where is it is at a second

THE TRAZER PROCESS

Astonishing Practical Results Attained in Ireating Wines by this Valuable Discussery

It is a little of congress of in that this Estre-Mark to Tus why has a baseboar purchases who parameted to rest for one patient of the particular of the mil and so all assessment of the first of the second of the se to sitte-l'time payth the fire of this has very the Perry have the non-celly agreed the monthly Win Congress t C. Lifernia has been melt be that a perf Last meters for his taken specify for call prints. There are with as to marfor those the research of eight pair time a day that is spongared and tanks, seen the hondred call us. These trained unlike to record in several years cak tanks have be a specially constructed under the lid process. ling and norrow, it is good at a fact in. It is the intention of the I brity Wine height and it with it will at the biles. Company to bettle the wines all idy This is to end, the protegon of the clee- treated, and dispose of them in the local trin wire to room a room on the pack- and Eastern markets with the help of eleages. This wir his to a put in with the vating the standard of our most valuable and of a lathe specially constructed, and Ay relabout 5 felt of the surface of the tasks in the to it cluster. Being created mornish weeks were find with wines of morning and the limited of several fair order by publicy 1997 vintage, viz. Influential viting runsis, pripse to extend Zinfan lel cler to I to Dianche white their espacity to meet their guirements that wine, part, sharp, and not brandy. The are contain to xist and the precability is electric current was applied himner the space of the works by and night, on the propose of the vintage of lars. Winthe industry product, which simply outs that are formented through which received from the extender of the dashs, the current of treatment as early as February next, certain extent, on, of the mainstays it just as bing as we have ownership of land being direct lithe scales perfectly. The cost if treating well as shan half magnetizing the legical contents. The channel act to the win - and

our country - that there is any beauty in many years, and will centime to be unless for exceeding the expectations of the in-demonstrate the immens benefit according the United States that can compare with they kick them out by high tar if, and the ventor, whe had not not never her or nearly to this State which stated that Maw sonny France. Italy or Spain in marketing, same rule, he believes, will work with other results of troiling quantities subject to the driver which in future which is entitle to interest. current from a small of error buttory. This the same is raw sugar. being the first class, hair the history of some for such an innertaking, and it would also. Committee can succeed in placing a decent lene that large to his of higher hall been be declared that American labor could not exhibit in Lindon under the imanagement submitted to the clothesis in species, make raising alongside of the countries just of a shrowd man, he will not only have not the effects have been witch I with the trouble in making a market there, but will are describerest. While the electric cur- and their is no mir as for front. Baw, The credit of suggesting that London create a demand for the goods in other rent was attached the grade not the light stewed laked ripres red they are wholes would be a profitable market for the ships of antires. Once get the exhibit in London (sould be listin by his in blay feeling a second tooths me and natural us. The fall ment of California products belongs to and let the Britishers get a tasts of the tremer ment of theil on touching the applies are the most judy and delicious, David Lubin, of this city. While on a California wines and fruits, they will never casks. The hope with a remote from both length to pean if rethat reason have the wire at the only of the instantly to be sell theat. Every god-sized family of interesting letters to the columns of the At the last meeting of the State Board of charge I with a trindy with a trindy with a beauty should buy a barrel of them at once for im-Bee, and in some of them he urged that it Trade, the Committee appeinted to canvass a sever shock who have he like feets in lister is and say than from spelling would be a most profitable experiment for the matter of sending a show abroard, results and the powerful in the results of the in-California to make. At first be contended ported in favor of it, and suggested that a ductive entreme in the cutents of the them might as I made into poly by corthat California should make a permanent a minutes of one hundred men, selected tasks. From the total forming the product the self-line said all Red exhibit in London, similar to those which from all parts of the State, be appointed to have been made in the East. There were make find arrangements. The report was and the samples hap on the homeology of the State, but signed by Win H. Mr.'s, G. L. Simmons, the main happened at this idea, but signed by Win H. Mr.'s, G. L. Simmons, the main happened at the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted as the same been wanted and C. C. Hitchinson, and I'm stight Hatch happened at the same been wanted as the same been wante over, and now agree that the undertaking will appoint his committee of the hundred Protein completely were be mind paral-

and the was approximated to days wirks, utility so that has built hand, effort towards making a creditable exhibit of fruits, wines, nuts, nuterals, etc., in the saying that after the London exhibit Lis program in the weef, year indicate four About thirty-four process, of the cases, trapid, they for great city. proved what is hoped for it, and a domaind seekin out with 3 to 3 feb. (seks, which aras) fail in H wand is so it recessed in In discussing the practical fluty of ships is created for Caute rule fruits, we can consent volume at volume to the form of the European market. Mr. points Spannards to consume all of their and we by to the test of the many 12. In France the year of the account of the consume all of their and we by to the test of the many 12. In France the year of the account of the consume all of their and we by the test of the consume all of their and we by the test of the consume all of their and we be the test of the consume all of their and we have the test of the consumer to the consumer all of their and we have the test of the consumer to t Lubin said that there was no doubt in his gramms at home or gott preparing them, now in make it is the consequent to the first and in Holgarm wind the regarded above to the consequence of the consequence mind that it would always prove a remune. The same cound be said of our wines. We ment half his this has a first house alrake so interest rative undertaking, dispute the child plabor, would continue the Frenchmen asknows the time the source of the said so the rative undertaking, despite the cheap labor, wound even make the Freichtnen makes welling three thems some to continue figs.

we have to continue against and the being hidge that they could not surpass us in the receiving to be a continue in the least of the least tanks From the start have to be made. Hourd quanty of graps space.

tanks From the start have to be made. Hourd quanty of graps space.

tanks From the start have to be made the start test from an information of the start test from an information of the start test from an information of the start test from foreign governments in keping up their cut a viney red f flood acres, which he will of the light second hips with first and present of flood acres, which he will of the light second hips the foreign governments in keping up their cut a viney red f flood acres, which he will of the light second hips the vine of the foreign government for a viney red for second hips the vine of the foreign government, you must know that grapes will be planted, and the economic in need to develop the foreign government and also determine the foreign government.

tirely the crude raw smell apper a sing to $n = w(w), n = -Th = -T(n) + \dots + T(n) + \dots +$ self in a non-wine-this shining brightness all I the offery by I'll ame visible whom softmated to a vivid fight, and may be regarded as a very victor be as painting otal Be award gard and a green off into w & millimight prolimprovito a t win in tiste, benjust, In place fith Company and the ball a local from snew

It is the intention of the Firsty Wine product, and could be mine a system of ships pull pure winescally. The Company, en. cursed by the cutput of their experithat one million government of put through for treatment as early as February next, the exposes of maturing and rathe old procoss. In a makes in the expression of an sible to people on the Eastern borders of being at about and sold with profit for transfer has profit winderful results, into users with about may be quoted to

USE PLENTY OF APPLES

Apples at a unlant on I Lapthis year.

Six F Is 2 Fram Lastr addition by ir-Ingation 2 by a sure of access lands by Board of Trade now sees the matter in the and it was urged that no time be lest in . The transit in all if the countrial its means of smalls and that engine range

for and years the states have regard I their amount the money for doing so is secured by tax | value of cheap poon labor will be tested. | aroma | functional win s | supplianting end than two and what made it let ares

TRULE DRAING

S. W. Lovell, writing in the American look / prist says: Trust evaporating is a business requiring careful study and experience to be successful, as I have found after a number of years of faithful study. Our grafted varieties of apples yield from six to eight pounds of the evaporated fruit to each bushel of fifty pounds of green apples, ac cording to the care and management the fruit gets during its preparation and drying. The best paring machines are none too good, and until 1886 there was not a weithy one to be had. But now several very practical machines are in use. I prefor muchines that pare, core and slice at the some time, though I used to think a separate sheer necessary to get the greatest production. But I can now get eight pounds to the bushel by the use of the combined Tabor machine. Two girls with this machine can prepare thirty bushels of apples in ten hours, and they work for sixty cents per day each. To save fruit, paring machines must have the best care. The knifeguards, knives and coring tubes should always be ready for exchange, and a machine without interchangeable parts is practically

A popular sentiment i vising against the use of so much sulphur in bleaching fruit. I am glad to see it, but bleaching of some kind will be followed for some time yet, Apples and peaches should be introduced to the bleach as soon as pared, as after that a good color cannot be had, as they turn red by delay. A good way to preserve the fruit for the bleacher is to run it as soon as pared into a vat filled with water made brackish with salt, being careful not to add too much salt, as then the fruit, when dried, would gather moisture and damage its marketing quality.

S read the fruit for drying on trays made of No. 5 galvarized wire cloth,

I prefer steam heat for drying, because by it much more work can be done by one fire than by the furnace system, and insurance rates are lower. Care must be taken not to leave the fruit in the evaporator so long as to turn it brown. I take out the fruit rather early and spread it about ten inches deep on a curing floor. where it lies for ten days or two weeks, and is shoveled a ver once or twice before packing. In this way one can take fruit from the day r while it is quite damp, saving fuel and increasing the working capacity of the machine. We also get a more marketable quality of fruit, for the color will be better. But I am not advising packing fruit before it is thoroughly dried, which is bound to cause shrinkage: and so much of this has been done (especially on bleached fruit, that will keep in quite a damp condirion), that commission merchants have got into a notion that all packages of evaporated finits must be docked for shrinkage.

No machine is yet made that will do good work on peaches ripe enough to be of rich flavor, so they must be prepared by hand. They must be bleached like apples, and spread on trays with the flat side next to the wire, to keep the pieces in nice shape. Peaches are packed in twenty-five pound boxes, and a nice facing is laid next to the cover. Considerable care is necessary in drying blackberries and black raspberries, particularly to see that they don't dry too much. I hardly dry them enough, but spread them in my curing room six inches deep, and shovel them over a few times until they are thoroughly dried. Four being right before going ahead. Our suffer most from adulteration, and have than the one just described.

pounds of the black raspberries will make one bound of dried fruit, and a bushel of peaches will produce eight to ten pounds of the dried article.

Evaporated apples in ring slices are packed for Eastern markets in boxes holding fifty pounds. Two pieces of paper are placed in the boxes next the cover and placed so that they will fold back each way from the center, happing down on the side of the box, and then the ring slices are laid in rows on the paper, with one-half happing so as to make a nice facing; then the box is filled from the bottom, and if the fruit is thoroughly dried a press is necessary to get fifty pounds into the boxes commonly used.

So much depends on proper management and experience that it is difficult to give accurate estimates about the business. One may make a failure out of the same run that another would turn to profit. But 1 will make two estimates. The first is on a business of drying three hundred bushels of apples per day of twenty-four hours, reckoning at the low rate we may expect for this season, as the crop is general:

П		
	300 bushels apples, at 10 cents per	
	bushel\$30	00
	25 girls to run paring machines, at	
	60 cents per day 16	00
	2 men to handle apples, at \$1.25 per	
		50
	2 men to attend the evaporator, at	
		50
	2 boys to attend the bleaching, at	
		50
		50
		50
	and the second s	00
		00
	Cr. by 1800 pounds dried fruit at	
	6 cents per pound108	00
		_

Net profit per day..... \$33-70 On an evaporator of seventy-five bushels' cal neity in twenty-four hours, such as the large fruit grower wants who handles his own crop, the showing should be like this: 75 bushels of apples at 10 cents.... \$7-50 5 girls, day and evening, at 76 cents 2 men at \$1.25. Fuel and incidental expenses.....

Net profit per day...... \$9 25

The figures allow only six pounds of dried fruit to the bushels of green apples, whereas good management may increase the proportion.

The estimates for labor are very close, but from these two statements fruit-growers can readily figure out whether they can make any money in evaporating or not, My statements are made on the supposition that the whole business is managed closely, and that apples are not allowed to rot or machines to take care of themselves; nor have I allowed for the waste. But if you use steam, you can make the waste into vinegar stock worth about \$3 per barrel, if the buyer furnishes the barrels. After the pomace has lain about six days, it can be pressed again, and gives about quarter as much juice as at first, after which the pomace may be burned for fuel in any boiler furnace with a good draught, especially if a little wood or coal is added. I do not think the many little cook-stove evaporating devises can be recommended at the present prices, as sun-dried fruit can be prepared quite as rapidly and brings very nearly as much as evaporated. Wellorganized evaporating houses are the only reliable means of gaining a profit at this business, and one must be very sure of wines, because in Europe these articles require a more energetic local treatment

ing six cents per pound for evaporated apples of prime quality at the evaporator, in sacks furnished by the buyer. This is as good as eight cents in New York City, as there is no packing, freights nor commission.

ADILTERATION DON'T PAY,

It gives us pleasure, says Bonfort's Cir cular, to accord to The Christian Union full credit for a timely and estimable public service which it has just rendered, through an unbiassed scientific investigation into the character and extent of adulterations practiced by the wine and spirit trade, wholesale and retail, of New York City. The motive and the method of the investigation are clearly indicated in the following editorial extracts, viz.:

We have shared the general impression that it is almost impossible to get a pure wine; that the wines of commerce are adulterated compounds in which the pure juice of the grape bears a small part; that brandies are similarly composed of various noxious materials; and that the worst, or at least the most flagrant, evils of drinking would be considerably mitigated if some means could be discoverd to guard against adulteration and scenre pure wines and liquors.

For the benefit of readers at a distance, it is proper to introduce this report by saying that in New York City, where Dr. Alhert R. Ledoux is known, no words of ours are needed to guarantee the impartiality and accuracy of his scientific work. As an expert he has no superior in the country; and the absolute impartiality of his examinations, as well as their thoroughness, can be relied upon. But if it were possible that his prejudices should color his scientific report, those prejudices would be against, not favorable to, wine-drinking, since he is a strenuous temperance man, and entered into this examination, when The Christian Union proposed it to him, with enthusiasm. for the sake of the cause which it was to

In order to make the proposed examina tion his agent purchased wines and bran, dies at different liquor saloons, some of the second, others of the third, class. The most aristocratic drinking-places were not visited. It is hardly necessary to say that the object for which they were purchased was not disclosed.....

The testimony of this report, a testimony which cannot well be shaken by anything less than another chemical examination equally thorough and on specimens purchased with equal impartiality, is that the wines sold in the second and third class saloons in New York City are not adulterated to any very considerable extent, ex cept as cheaper wines are mixed with them or they are diluted with water or fortified by spirits. This is the scientifically ascertained fact. The natural deduction from that fact is that the cheap wines made in America are so cheap that it does not pay to manufacture spurious imitations. The cheap wines have driven the manufactured article from the market. For so much as this we may give thanks to the vineyards of Ohio and California.

In his report, Dr. Ledoux says:

Having previously made an examination of whiskies as sold in New York, I confined myself to brandy and sherry and port

Western New York markets are now offer- that reputation here. Whiskey-the most common intoxicant in America, if we exclude beer-my previous investigations have shown to be rarely adulterated in any manner to make it more harmful, the alcohol only being increased or diminished artificially, and the various "blendings" and changes being usually in the line of harmless flavoring, coloring, etc

The prices asked for brandy varied from 50 cents to \$1.70 per quart; for sherry and port, from 45 cents to \$1 per quart. Al the samples were examined qualitatively for adulteration, and fifteen subjected to a more complete analysis

The difference between all wines and distilled liquors from the chemist's standpoin is small. They are all mixtures of water and alcohol-first, with slight differences in sugar, flavoring and coloring matter. In natural wines and liquors the difference that distinguishes one from another in tasts and smell is in subtle, intangible others and these ethers and flavors produce practically no physiological effect.

Whether we speak of the good or bad effect of alcoholic stimulants upon the sys tem, it is the alcohol that produces the ef fect, and we can practically disregard th other constituents in considering the ques tion. (I am speaking of pure liquors.)

The samples analyzed are no exception In most of them-nearly all-are traces of zinc, lead and copper, from metallic recep tucles, pipes, or fancets acted upon by th acid liquids. But many soda waters, syrup and mineral waters sold in drug stores con tain, from the same cause, more. It is sel dom, however, that these poisonous sal stances are present in sufficient quantity t produce any bad effect; in no instance wa this the case in the samples as analyze above. There are large additions of suga in some, of burnt sugar color in many, an of cochineal in the ports. (No logwood was discovered) There were sma amounts of tannin from casks, etc., etc.

But as to the alcohol: In the brandie two samples contained more than the no mal-it had been added-while all the other ers had been more or less diluted wit water. In the ports, the alcohol in all br one sample was below the average of the natural wine. In the sherries one sample had been "fortified" and one greatly d luted, while the others were normal.

But it is a fact that the flavors and color used at the present day are either harmles or employed in such small quantity as t be fairly left out of consideration. The sevre to increase temptation by making th liquor more attractive to eye and palate but liquors manufactured and sold at th present time and in this city, so far as m tests go, are not injutiously adulterated 1 poisonous substances.

REMEDY FOR DIPUTHERIA. - Lime-water an admirable remedy in cases of diphtheria Its local effect is most useful in cleansin and purifying the fauces, and its mode of application is the easiest imaginable. I requires no spray apparatus, no douching and no effort at gargling. It is sufficien to have the patient slowly swallow a ter spoonful or more every hour, in order t get good results from its use. This fact i of the greatest importance in treating children, who are too often cruelly torture in the attempt to make local application to the throat. Lime-water can be give easily, and is taken readily by children and there are few cases of diphtheria which

BATTLE OF THE BOTTLES.

The last number of the Revie Scientifique contains an interesting article by M. E. Ratoin, in which, under the heading of "One Aspect of the Wine Question," ar account is given of the wines of the diff rent vine-growing countries and their influence on the wine trade in France. Until quite recently French vine-growers, to lieved that they would nover have to encounter any commercial competition for their clarets and champagnes, and that their eld reputa tion and the quality of their wines would always ensure a good market and excep tional prices. The time, however, has come when their hopes have been destroyed by that large part of the public which, without being wealthy enough to pay a very high price, will yet not do without their duily bottle of wine,

The three enemies which threaten the French vine-grower are the excessive increase of duty on wines, the frauds and the innumerable imitations of French labels and the competition of the small vine-grow ers abroad. Bussia, Servia, Greece, Aus tria and G rmany are all countres in which vine-growing is bleoming an important agricultural industry, and quite recently Australia has paned the enemy by manu facturing wines which, though they are more alcoholic und intoxicating, are not unlike the French growths known as Cote d'Or and Médoc In pointing to the growths of the different countries and their distinguishing qualities, the writer gives Hungary the first place, after France, among vine-growing countries, as producing the greatest variety of growths. Of these the growth known as Tokay is the first and foremost, and it is celebrated all over the world. According to the Hungarian proverb its color as well as its price is gold. It is grown only in a district of four villages; and the most celebrated among the different Tokays are those known as St. Thérèse, Szarwach, and Mezer-Male.

Less expensive, but equally well known, are the growths known as Lugosch, Ruszt, Bosing, and Neszmelyer; while the Hungarian claret known as Corlovitz has become a favorite tonic in England, Concerning it we are told, "Carlovitz is a sweet, red wine, very light, and 'd'une grand fin. esse,"" The degree of perfection which vine-growing has attained in Hingary in the course of the last few years is chiefly due to the powerful aid given by the Government to every effort for the amelioration of the industry. Special experts have been appointed to inspect and inquire into matters connected with vinc-growing; and in 1851 a vault was opened at Budapest where wines may be sent direct by the proprietors, the administration analyzing the contents of each vat, and accepting only wines which are absolutely pure. The great enemy which is threatening Hungarian vines is the phylloxera, which threat us to cause the ruin of many of the small vine-growers

After Hungary, Rhenish Prussic is the most important competitor of France in wine-growing. The growths may be divided into the wines grown on the right bank of the Rhine, those on the left bank, and those known as Moselle. Of the latter the following are the best knewn .- Brauneberg Thiergarten, Neuberg, Josephote, Ohligs herg, Winningen, Scharzberg, Erdau, Bernkastel, Win rich, Graach, Welden, and Pisporter. Most of these wines go to Belgium, where, for their lightness and pleasant taste, they are much appreciated. The wines grown in the Ahr valley, between

Bonn and Coblentz, are the most celebrated of the growths on the left bank of There are changes which no one can alter, seet feeds on it. The white walnut or but the Rhines. They are white, dry, aromatic, but there are some which are partly brought | ternut is also a good thing to plant. The and spirituous; but they do not lose their about by ourselves, for commercial convens black walnut has a transcendant value litrough that or till they have been kept in a tions are not always made with desirable the known, which is that the tine European vault for at least seven years. If the har- care and produces. Sense have been voted walnut strains requesioned years. known wines of the left bank of the Rhine Mexico, which is a verifiable tool's treaty of Europe should succeed top grafted on is the Liebfroundich, grown near Worms. We so in to ferget the economic truth this hardy stock in all the middle and and the far-found Rudosh iner, first me, which the metal is of the Chamber of States. The writer of this has ported from Bourgeyne by Charlemagne. | Commerce pointed out lately to the Minist | sent thousands of black walnut seedlings to body than these grown on the right bank, politics are a nation's strength if wisely dif bas yet hundreds of profitable paths untrodbut are of a better quality and have a richer flavor, the best wines on the right they cause all its r some a to decrease," bank are obtained in the district between Mayence and Coblenz. Among these are the wines grown at Hochheim, Eltville Wallrath and Johannisberg. All others are stronger than the growths of the left bank, and aromatic, but rather dry, and require a long time before they obtain all their good qualities.

After giving a short account of vine growing in Spain and Portugal, and in Calof rima, M. Ratoin concludes by saying :-. Thus everywhere, in Europe and in Amer-1c4, duties, mutation, and local production. make a terrible war on our wines. . How shall we battle against these? By increased duties on imports? By putting a higher duty on English coal and from? We connot undertake to indicate the measures which ought to be taken. It is our business only to throw light on a situation to which

vest is good, the Ahr valley produces some by Parliament with call also superficiality, either stock or top grafted. The hardier aguing our bottles of wine. One of the best. One of the search counterfact the aty with a varieties of this fire stof nots from the north All the growths on the left bank have less ter of Foreign Affairs of the commercial California for this purpose. Horticulture rected, but they bring about its run when

THE BEACK WALNUT

Every land owner, say, D. B. Wier in American Garden, should plant the black walnut. It is the most valuable of trees. No tree can marly approach it in yearly future value. Trof. Brown, of Ontario, catimates from an experience of his own that an acre planted with this tree may in fifty years produce a value of \$18,350. Prof. Boal, from his experience, thought this estimate the low. Think of a mean annual income of \$322 from an acre of trees, the trees and planting of which could be done for less than \$50. At least every waste place, especially if the soil is rich, should be planted with the black walnut. It is a sturdy, handsome, vigorous tree, easily

people at the pay sufficient attention grown, because no animal and only one in-

OLIVE CULTURE.

The San Francisco Bulletic reports that during no season in the history of California have so many olive trees been planted as were set out during the past winter-Statistics collected more than ten years ago showed that the greater part of the State was suited chimatically for the cultivation of the olive, and now capitalists have gone into the business. It is a century since the Mission Fathers planted the first olive orchards in California. In some cases these groves onthred the churches and dwellings creeted by the same hands in their vicinity. Some of the fashionable clubs of New York are supplied with olive oil from California, and it will not be long before the supply will be large.

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Clothing, California Manufactured.	323,670							
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TRIDAY..... NOVEMBER 23, 1888

THE POLLOWING SUMMARY of the latest information received from the wine growing districts of Europe is obtained from Benfacts Cleenlar:

The French vintage has been brought to a close both in the Upper and Lower Medoc as well as in certain "palus," but in some "palus," not ably in the islands, the gathering of grapes still continues and will not terminate before the first week in November. The amounts brought under shelter are getting to 1. something extraordinary they certainly surpass expectations. Most proprietors have harvested double the amount they secured in 1887, and several of them will make three, and even four times, the quantity of wine they produced last year. In the South, in the Provence and Rousillon, the quantity secured is greater than had been expected, and although there is much irregularity of quality, many wines promise to prove quite a success. The Dordogne and Armagnac have done well, the good Bergerac growths will turn out excellent; this may also be said of the Gers, combining a good yield with creditable quality. The Landes have great abundance. Central France has been backward, and exhibits great irregularity both in yield and quality. Eminently favorable returns are received from the Beaujolais and Maconnais in every respect. A similar report reaches us from Algeria; good new wines have arrived here from the latter, both as regards color and degree. Our own Hérault wines are not only abundant, but their vinosity is strong, and the flavor pure and unobjectionable.

The vintage of fine wines in Burgundy is not quite up to expectations either in point of quantity or quality; old wines, notably of 1886, are therefore in request. The quantity, in Charentes, was very irregular this vintage, but, as regards quality, it is safe to star that it is one of the best we have had for years.

The on the whole satisfactory September has been followed by a most variable Octo. ber, leading to a good deal of disappointment in Rhenish Hesse, and the remaining German wine districts. Maturity has been retarded by the lack of warmth, and it is to he hoped that the last week of the current mouth may still make amends. At any rate, it is certain that in a great many report, the output would be about 408,232,-

that it will be unfit for consumption unless the crop of 1887. The quality of both sugar be added to it; hence the Wiesbaden-Rheingan, Chamb r of Commerce has petitioned the Imperial Chane Hor to suspend alone, but in diminished flour output. It the provisions of the law relating to the socalled natural wines, and allow sugar and water to be added to the must of the 1888 crop. For a couple of days past the Haardt Mountain District has been in full swing. and in point of quantity the yield will probably not exceed half an average, but by way of compensation the quality will, in all likelihood, turn out better than had been supposed. In the Rheingau wherever the grapes had sufficiently matured, as, for (xample, in Lorch and Assmannshauser, the vintage was taken in hand, but on the whole there is much delay and dissatisfac-

Radiant sunshine has favored vintage work in Portugal, and everything leads to the hope that our wines will be of a quality superior to last year's, especially in the province of Torres Vedias and in the surrounding country, but the phylloxera has destroyed about one-half the crop, whereas in Northern Estremadura and the Beira, grapes have been more abundant. As a rule those proprietors who are anxious to produce a good quality, have only gathered perfectly matured bunches of grapes at the start, giving the rest a chance of ripening at leisure, and in this the weather has favored them throughout.

There has been great activity throughout the Spanish wane regions in bringing under shelter the 1888 vintage, which, on the whole, may not quite reach in quantity last year's, and whose quality may prove deficient in a good many localities, yet should be viewed with satisfaction when we consider how poor the outlook was but six weeks ago. The fact is, that the October rainstorms early in the mouth did a great deal of good, the soil throughout the Pcninsula being parched at the time, the grapes suffering from extreme heat, and the roots of vines from a lack of moisture.

In nearly all the Southern provinces of Italy the vines have done remarkably well, and there is great abundance, although in a few localities the drought of the first Summer months has damaged many grapes. while on the other hand preventing the spread of the mildew. As matters stand in several provinces, proprietors do not know whether they are justified in rejoicing at their abundance or not, for they are at a loss where to put all their new product, many of them having over one-half of that of 1887 still waiting for a panchaser,

The result of this year's Hung man vintage does not exceed two-thirds of an average crop. At Great Kanisza the wines are too sour--8° to 11° sugar: light and otherwise sound. 1888 will consequently rank with the poor years, and prices will rule correspondingly low.

THE GOVERNMENT report makes the average yield of Winter wheat, in all the States for the crop of 1888, twelve bushels, and the average yield for Spring wheat a fraction over ten bushels. On an area equal to that of 1887, the output of Winter wheat this year would be 200,678,517 lorshels, and of Spring wheat at ten bushels, 134,419,-582 bushels—a total of 425,096,994 bushels, as compared with 456,218,000 bushels for 1887, indicating a deficiency of but 31,122,-000 bushels by measure. On the basis of the approximate acreage of the June, 1888,

localities the wine will turn out so sour [762 bushels, or 47,985,238 bushels less than to last year. The loss is not on weight is difficult to estimate just now how much this difference will be. The Government report is widely different from the many private estim des.

> PEOPLE IN the East who have never trav elled beyond the boundary lines of the State in which they may reside, cannot reasolmbly be supposed to credit all they read about California. The comparison between their home surroundings and the pictures of western life presented for their appreciation is so great that the truth is apt at times to be mistaken for a pleasing fairy tale. To overcome this very natural feeling of disbelief, and sweep away all doubt on the subject, it will be only necessary to offer the most convincing evidence of all-that of the senses. Seeing is believing; when it comes right down to argument over manmoth pumpkins, which afford in themselves sufficient proof and guarantee of soil and climate

> In the project to send a travelling exposition of the resources of California, through the East, the State Board of Trade has struck a happy idea. It will tend to in erease immigration, by corroborating in a manner plain enough for those who run to read, the glowing yet truthful statements which from time to time have found their way abroad about the wonders of Califor-

> The indications at present are that the immigration during the early mouths of 1889 will be heavier than ever before. The railroads anticipate an extraordinary inerease in travel, and are already making preparations to meet the rush. Northern California will more than probably be the chief point of attraction. The South had a corner on the boom last year, and worked it for all it was worth. The coming movement in lands will be more general, and the attention of investors will undoubtedly be directed to land which, while equally as good have not been forced to the top notch of prices during the late excitement.

> The future prosperity of California will mainly depend on an increased population, and it behooves all citizens who have the interest of the State at heart, to foster any scheme which will aid in advertising abroad the nurivaled opportunities for establishing profitable homes within our boundaries.

At a special meeting of the Board of State Viticultural Commissioners held last week, the following matters were discussed and passed upon: In the matter of representation at the Paris Exposition the Commission decided to collect and forward through Commissioner Hallidie, a creditable (xhibit of wines and brandies from different parts of the State. Platt's Half has been engaged, and will be known as the Viticultural Exchange. It will be ready for occupancy the last of November, when producers, manufacturers and merchants will be called upon for samples to be placed on Dr. W.S., Manlove, Commisexhibition. sioner for the Sacramento district, stated that the drying of wine grapes with them had been a great success, as very satisfactory prices had been received; that the supply was not equal to the demand. He predicted that unless satisfactory prices were paid next year for fresh grapes, the entire crop in his district would be dried.

THE INTERNATIONAL Company of Mexico does not seem to have cast its lines in par-Winter and Spring wheat is greatly inferior | ticularly pleasant places, A disposition to embrace the whole earth, under a granfrom the government, led to disputes which finally culminated in the appointment of Senor Sanchez Facio as a special Inspector of Colonies in Lower California. The result of his investigation, as embodied in a report now being made public in the Diario Oficial, the organ of the Mexican government, is not at all favorable to the Company in Lower California, Senor Facio states that the terms of the concession, in regard to the settlement of the lands, have not been complied with, and that large tracts have been sold to foreign eapitalists who will not become colonists, but have bought solely for the purpose of specula-

Another charge is that the Company has deceived the National Government by making false representations as to the number of colonists and methods of colonization. The concession required that a majority of the colonists should be Mexicans, whereas Senor Facio claims that they have been mostly foreigners.

It is also charged in the report that the Company has appropriated to its own use lands belonging to private individuals; and further, that the Company has not made the survey, measurement and partition of the zone granted in the Cedros Islands, thereby invalidating their title.

The assertion is made that they have not established, during the two years specified by the concession, from March, 1886, to March, 1888, the fifty families required by Article 12.

The statement is also made that the Company has not furnished these families, or the families existing there, the fifteen bectares of land as minimum, or one thousand hectares as maximum, according to Article 13; nor furnished to each head of family the implements or work, according to the same Article 13.

In the mean time, the International Company has added to existing complications by turning over its contracts to an English company, who will now be compelled to wriggle out of the difficulty as hest it can.

THE STATE Viticultural Commission now estimate that the total output of the wineries of California for the season of 1888 will be 17,000,000 gallons, of which 4,000,000 gallous is brandy. This is slightly in excess of the yield in 1887, and much better than was expected, just after the first rains which so badly damaged the grape crop throughout the State. One noticeable feature of this year's wines is their lowness in color, betokening a small percentage of alcohol. This fact is attributed to the small amount of sugar in the grape, owing to the late and imperfect ripening of the grape. Last year's wines, which were unusually high in color, and in great demand for the Eastern markets, and good prices are being realized by those who were fortnnate enough to have any of last year's stock left on hand.

AT THE recent sale of wines and liquors from the cellar of the late Sam'l J. Tilden five hundred and twenty bottles of Steinberger brought from \$3.50 to \$9 per bottle. Some "double O" Madeira brought \$3,50, and some blne-grass whisky, forty years old, brought \$11,50 per gallon. In all, 1440 bottles were sold.

A WINE EXCHANGLE

An Organization which will Prove of Incalculable Benefit to Producers.

Plans for the permanent exhibit and viticultural exchange in Platt's Halil ve at last assumed practical shapes the to st serious difficulties Lavinghort were to a as will appear by the entine which is now ready for the public

Before leaving for the East Mr. D. O. Mills, proprietor of the half left in streetions to have the half in getting through the state. greatly improved, which is now burned : satisfactorily. The present this extent was ready the high lefter that the first present month, when the Vitte Stirle Confidence will enter into proceed on the reference improvements here agreed up to a

One of the leading features of the exhibit will be wines and broth it a sub Jode . consumption, as distinguish I fill to the virtual vintages suitable only for storage. The oligeet of making such an exhibit word it too entirely frustrated of equations for sampling were not provided, and in the ways of was found the chief standings'lok in Jow preparing the plane for the row is statute to A free sampling-room would, of a cosmy !become a public unisate on that the trace.

Commission would be to be the state. However, exhibitors of his products would not be withing to contribute simples for free use of visitors. Six it is now bors of the Commission have shrunk fr with r sponsibilities of managing the same in a co it has seened, at first, in vitable that they must conduct a portion of the m-State v . . . after the manner of a school, and 1 %. obliged to keep accounts of petty sales in pany the interest of numerous exhibitors. A part of the statement of this difficulty has how ever, been invented. At the last meeting of the Board ac munification was recent 1 from Peter Klein, proprietor of the well than the statement of the regime of the following the regime of the well than the regime of the re creasing. He made an off r to be see a pore trub. tion of Platt's Hall for a cafe to be open and It is to the public between the lieurs of 11 c.w. and 3 r x., in which would be served, ascording to the desire of the visitor, a firstclass lunch-coff a, said, oysters, ontwo hot dishes, cold meats, etc -with the understanding that no wines should be served, excepting those on exhibit in the evaluaserved, excepting those to calculate the hall, all of which must be of C if rail. T lead hall, all of which must be of C if rail. production. H finth r proposition control of this safe should be writer that it rules that may be established by the control of the second of the processor of the mission, and that the charges to be made the gradients are set to the gradients will be for any samples submitted by exhabiters, in charling the individual product to show by the exhibitors, uniform, without risplace this extension and the grand part of the by the exhibitors, uniform, with energy s_1 , to the price of the different quadrics probability s_2 , s_3 , s_4 , sented. This proposition so in ditas is all the difficulties, that have been heretes, the confore feared, and the Committee for the for Board was authorized to conclude an are in rangement with Mr. Klain for this ony; ...

All the details for manying this a feet to the have not by to been completed, but the form them is lowing is an outline of the prieral plan in . aureed to:

A portion of the half on the lift of the way of main entrance and connecting with ti- 1-21. alley to Pine street, will be partitioned wife " full list of all exhibits submitted for sample to the character of the same transfer of the character of the

the state of the extraction of the second of the extraction of the rose camping there are giving quested than the year to pull-continuous transfer to providing the land of the providing the land to such years which can set and the professional and the second second for the second the parton counts for $\mu_{\rm B}$, then counts for $\mu_{\rm B}$ ets for post- and the land of the fi the streament with south business didestinated the stream of the stream

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i A. S. H. odi drave as it is to fit up the of the the Paris Expoof plan a tren of Platt's is, the fit anspect f and I Vit. a tora Commission.

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Sugar Quotations

S . . R file ry pro-list dated -- (Λ. Put Cub., γγ_ec) γγ_e and Γ_e, Tun Crushol.γ_e; P. Li B. T. Dry Granul ded, Costo was research A. C., C. Extra C. G | r : (1, 5 | 1, Star Drips Syrup, | s | 2r | ht) | -2 | 1 | 5-gail | kegs, | 1 | 1 | hass | 5 | 1 | 1 | r | dloin.

Let fith American Sugar Beforery Topological States Fine Jav Grand & J. XX 6716. Dry G. S. & B. S. Confedences, Cir-. Govern Sprag, in 1d s, 20e per

WHOLESVEL WARREL.

erry Market A for Research To the TSS Masses See A Malacase See Long TS at the technique of the Community of the Communi and the form of rep of a Missa to hall the 18 for Mr.

OUR NATIVE WINE SHIPMENTS BY SEA.

PER P. M. S. S. CO'S STEAMER SAN BLAS, NOV. 13, 1888.

TO NEW YORK.

MARKS.	SHILLFILS	PACKAGES AND CONTENTS	GALLONS	AVELE
. r	Carpy & Co	25 birrels Wine	1,250	\$500 10
£	Dr Sel & Louis	10 barrols Wine	506	20:
V		30 barrels Wine	1.515	60
. W		G harrels Wine	302	16
S & Co	**	I barrel Wine		
8	6.4	I half barrel Wine		
B		1 half-barrel Wing		
V	**	2 barrels Wine	206	12
Ч	**	3 barrels Wine 1		
F	* *	B half burgels Wipe		
B	**	2 barre's Wine	311	16
Bros	5.0	10 barrels Wince	509	20
A in diamond in	- Kaliber & Van Derzen		7,398	2,94
Ps	Lengthand bres	103 barrels Wine	5.121	1,633
F	4.0	2 barrel. Wire		
**	+ 4	I half barrel Wine	126	65
alt Communication in the	S L hungu & Co	2 joinchions Wine	324	16
	**	1 barrel Wine	- 5	
& College College	Williams, Dimonda 4	(181) arrely Wine	4,922	1.21
H		12 partels Wine	1300	24
. G		I barrel Wine	50	2
Dros	14	2 ba'f-barrels Wine,	57	3
Total amount of Wine			24.5(H)	88,93

TO CENTRAL AMERICA

E.T. Amapala John T. Wright	112 kezs Wine.	1.141	\$116
L.S.& H. San Juan del Sur 9	I keg Wine	10	10
U.C. La Libertad	ri kegs Wine	72	54
U C, La Libertad	B kegs Wine	53(1)	(35)
J E, Amapala	Wkies Walter	72.	56
F M Z, Corinto J Gundlach & Co	7 halt barrels Wine	183	128
J L, Guatemala	46 cases Wine		164
F Z Co, Cerinto B Dreyfus & Co	S barrels Wine,	272	275
J L D, Guatemala.	6 half barrels Wine	166	125
J R & M L, Amapala Eug de Sabla & Co	2 barrels Wine	5163	17
A D, Amapala	2 kegs Wine	30	50
L & L, Champerico Schwartz Bros	30 cases Wine		117
B B & Co, La Libertad Bloom, Baruch & Co	2 harrels Wine	103	67
	36 cases Witte		119
A T, Champerico Urrela & Urioste	Dicases Wine		75
R A S, Corinto			34
F C C, Guatemala Parrott & Co	4 cases Wine		13
Total amount of Wine, 126 cases and		1,287	81,499
TO MI	TY FOLD		

TO MEXICO

L G & C, Tonala Cabrera, Roma & Co ,14 barrels Wine	686.	8665
Y M, Manzanilla L Clastreta Il barrel Wine	450	25
P.E. San Blas	2008	109
S carks Wire	476	185
A H C, Acapulco Urrela & Urioste 20 cases Wine		36
2 casks Wine	119	16
P. S., Mazatlan 1 Gutte	250	150
A D & Co, Mazatlan Fredericksburg B Co. 1 cask Wine.	60	40
		30
T, Mazatlan Thannhauser & Co 2 cases Wine		24
P R, Manzanilla B Dreyfns & Co 2 half-barrels Wine	54	35
J.S.M., Manzavilla	83	7.5
B S, Mazatian 2 half-barre's Wine	55	- 40
J M R. San B as J Gundlach & Co [14 kegs Wine	216	137
Total amount of Wine, 32 cases and	2,2 6	\$1,64

TO HONOLULU-PER STEAMER AUSTRALIA, November 6, 1888.

A S & Co	. C Schilling & Co	2 casks Wine	212	880
l J	. Arpad Haraszthy & Co	(5 barrels Wine	414	185
11	**	15 kegs Winc	200	172
4.6	4.6	12 kegs Wine	120	83
**	4.1	5 cases Wine		36
7 М G	J Gundlach & Co	I barrel Wine	.1.	25
4 Co	Spruance, Stanley &Co	11 cases Wine		115
М	. J Pinet	2 half-rasks Wine	7.0	33
& Co	Lachman & Jacobi	5 casks Wine		
11	4.4	3 karrels Wine	3.15	344
in diamond	S Lachman & Co	3 barrels Wine	1.55	140
in diamond	. Donald Gedge	180 kegs Wine	1.250.)	4.4
4.1	4.6	40 cases Wine	1 1	1.231
W.M. & Co	, Kohler & Van Bergen	6 barrels Wine	005	221
Total amount of Wine	59 cases and		9.017	82.666

MISCELLANEOUS SHIPMENTS

DESTINATION	VESSTI.	RIG	GALLONS	VALUE.
Honolulu W Victoria U:	ej inder. G Irwin natilla table.	Brig	1,697 99 61	$^{888}_{1,31}$ $^{65}_{65}$ $^{36}_{225}$
Total			4.050	82,523

WAKELEE'S



Gopher and Squirrel Exterminator

Description of the Blueberry.

The Blueberry is a valuable truit, and is a reliable fruit to grow in our northern States where the more tender varieties of fruits winter-kill. It is perfectly hardy, having stood 40 degrees below zero without showing any injury to the most tender buds. It ripens in this latitude about the 1st of July, and is borne in clusters like currants; shape, round; redshish purple at first, but becomes a bluish bluck when fully ripened. The flavor is equal to the raspberry, a very mild, rich sub-acid, pronounced by most people delicious. It may be served with sugar and cream or cooked sance, and is splendid for winter use. The plant seems to flourish in all soils, and is a prolific bearer. It grows very stocky and makes a nice hedge. The shinning dark green leaves and the blue fruit making a pleasung contrast. The demand for the fruit is great, and usually brings 15 cents per quart. They commence bearing the first year after setting out, and yields a full crop the second and third year after setting out. They are propagated from suckers and root enttings. The plant is about the height and size of the enrant bush, and very stocky, holding the finit well up from the ground. Plants should be set in the fall and spring, in rows two or three feet apart, and five or six feet between the rows, making a perfect hedge, and no grass or we do should be allowed to grow between rows.

PRICE LIST:

1 Dozen Plants by mail, 60 cents. 2 Dozen Plants by mail, \$1.00 100 Plants by Express, \$2.50 1,000 Plants by ex. or freight \$15,00

How TO SEND MONEA;—I would prefer to have money sent by American Express order, all sams of \$5.00 and under, cost only 5 cents, and if order is lost, money will be promptly refunded to sender. If not convenient to obtain express order, money can be sent by registered better or post office money order or postal note, drawn on Portland, Mich. Postage stamps will not be accepted only from our customers that cannot obtain an express order—only those of one cent denomination wanted.

Plants are carefully packed in damp moss and delivered to express or freight office, for which I make no extra charge. Address

DELOS, STAPLES, Portland, Ionia Co., Mich.

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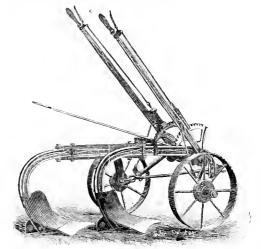
Fruit Trees, Grapevines and Ornamental Trees,

White Adriatic Fig. Ten Tested Varieties of Table Figs, Olives
Pomegranates, and also a Fine Collection of Palms,
Roses and Oleanders.

13 A five-pound box of White Adriatic Figs sent by express to any address on receipt of \$1.50. Send for Fall Catalogue and address all letters to

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PEERLESS GANG PLOWS.



-FOR THE-

SEASON OF 1888.

Have Heavier Beams and Made Stronger Throughout, Than Heretofore,

The Only Steel Beam Gang Walking Plows which will not Clog in Heavy Stubble or Weedy Land.

TESTIMONIALS

Light draft, strong and durable.—M. Murray, Livermore Has given entire satisfaction.—E. H. Farmer, Gilroy, Superior to them all.—A. J. Huff, San Lucas, Easily managed, strong and durable.—H. Carpenter, Suisun.

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SAN FRANCISCO - - - - SACRAMENTO

OLIVE RANCH OF 448 ACRES.

Or 240 acres in one place and 200 memory other. Sold tegether or apart of 11,000 olives planted, and consistent bear in 1887. Fully equipped with the ings, agricultural tools, horses one Sold lons of hay and plenty of grain for street of water. Title perfect. Solvati the Solvation Barbara county, near Liscolays a lipe. Will self-at a bargain.

For particulars apply to

INCORPORATED ISSI.

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FARM FOR SALE.

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460 ACRES

TREES AND PLANTS. CALIFORNIA NURSERY CO.,

NILES. ALAMEDA COUNTY. CAL.

LARGEST STOCK ON THE PACIFIC COAST

Fruit Trees, Olives, Oranges and Lemons, Nut Trees, Wine and Table Grapes, Berry Plants, Shade Trees, Evergreens, Shrubs, Roses, Etc., Etc., Etc.

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JOHN ROCK, Manager,

- - CALIFORNIA NURSERY CO.

Niles, Alameda County, Cal.



CALIFORNIA WINERY AND SECURITY COMPANY

Wines Stored and Loans Negotiated on Pure Sound Wines Only.

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SAVE MONEY

By Ordering Your Groceries

CLUFF BROS

Largest and Cheapest Cash Grocers on the Engrape Hole Process of Coast.

ALL COODS PACKED AND SHIPPED FREE.

Send your address and have their Machy 1. If the address may populate SESSO A FRIAL ORDIN, cz.

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SHIPPERS AND COMMISSION MERCHANTS

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Royal Baking Powder.

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Walter Baker & Co's Chocolates and Cocoa
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LARGE STOCK OF OLDY TRLES, ALL SIZES,

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SUBSCRIBE FOR THE SAN FRANCISCO MERCHANT

SAN FRANCISCO.

GRAPES IN TRANCE.

The following interesting article on wine in France, and how the grape crops are gathered, is contained in a recent issue of the Pall Mall Radoct:

A visit to the Pantheon, the central depot in London of the biggest wine merchants in the world, is the subject of the following article: The Pantheon has seen many changes in its varied career, but it had sown the last of its wild outs when it passed into the hands of the Gilbeys. The ground floor which was once dedicated to that lively goddess, Terpsichore, is now a large printing establishment, where billions of labels and millions of documents relating to the trade are turned off in the year, The cork-cutter has a habitation here too and a busy bovy of girls are stamping them with the trade mark. Below them, again, run the catacombs of the Gilbeys-vast gloomy, damp and funereal, where I should be sorry to say how many gallons of good wine are stored- wine in single bottles; wine in magnums; wine in Jereboams. wine in Rehoboams. To the uninitiated I may explain that a Rehoboam holds eight ordinary bottles in its capacious interior, and is rarely met with in real life. But I was informed that these vaults were trifles compared with the great stores at Camdentown where the real business is done.

"Let us take you," say the Gilbeys, "in imagination to the banks of the Gironde, As we approach the estate we find the vintage in full progress. Nearly a hundred men, women and children, in bright-colored dresess, are engaged in gathering the grapes. We stop to examine the fruit. which presents an even ripeness and softness of the skin, which latter scarcely requires pressure to yield up the luscious contents it incloses. From time to time a dreamy, soft-eyed pair of oxen, mostly beasts of great size, pass along, bearing on a rustic-looking cart two tubs heaped up with fresh gathered grapes, each tub representing a quantity of fruit which an English gardener would look upon as a good yield for a fair sized vinery. Here, however, these tubs keep passing to the presshouse during a fortnight or more."

The grape gathering is executed as rapidly as possible. The inhabitants of the vine-growing communes being insufficient for the labor, other grape gatherers are sent from the neighboring communes and departments. The men's wages are ordinarily 1 franc 50 centimes per day, with food. Sometimes it is found necessary to merease the price when the operation of grape gathering must be carried on more rapidly than usual. The wages of women and children may be valued at half the amount of the men's wages. The wine-press men receive some centimes more than other hands, Thirty years ago the wages were only hatf what they are at present. This rennion of workmen is termed "maneuver." Every twelve or fifteen rows has a director of "maneuvers;" his task is to hasten the gatherers, to watch that the grapes are not left upon the plants, to see that only those that are ripe are picked, that care is taken to pick up the fallen grapes, and to observe that neither leaves nor anything else improper is allowed to fall into the baskets (paniers). The grape gatherers are placed in the following manner: The women and children are employed to cut the grapes; a cutter is given to each row who gathers the grapes and puts them into a wooden basket.

ket emptier, receives from each grape gatherer his full basket, which the cutter exchanges for an empty one, the basket emptier upsetting the grapes into a basket (a little wooden bucket containing about twenty-four liters). In the meantime the baste holder presses his grapes, taking care not to crush them. Two porteurs de bastes (or bucket carriers) are allowed to every eight vine rows. These bear little straw cushions upon their backs, upon which they receive the buckets, which they empty into small tubs placed upon a eart; these tubs ordinarily contain thirty-two buckets. In several vineyards they have modified the labor in the following manner: The porte-bastes are replaced by porte-hottes, which, in rows of four and four, according to the harvest, or in rows of five and five, receive directly from the cutters the contents of their baskets, and convey them in the doubles placed upon the carts. The proprietors who have adobted this alteration are satisfied with this mode. As soon as the tubs, or douilles, have arrived at the wine press the pressmen receive them and empty them into the egrapper, which serves

Arrived at their destination, the contents are emptied into a long, low wooden tray. The grapes are by a simple process sepa rated from the stalks, the fruit passes, almost whole, into large vats, where it is crushed simply by its own weight, and where it remains some ten to twelve days, until the skins and pips have risen to the top and the bright juice is ready to be drawn off below. The wine thus "made" -though, in truth, that word is scarcely applicable to so simple a process—is then drawn off into hogsheads and carefully stored for three, four or more years, previous to consumption or botting,

to separate the grapes from the stalks.

The most interesting part of the work, the battle with the phylloxera, is in perpetual progress, and has cost France the huge sum of £400,000,000. How do the vine-growers meet the attack of this terrible little foe which has cost France such an enormous treasure? It is said on good authority that one female " phylloxera on the leaves" born from the winter egg, has, at the end of May, laid 5,000 eggs. This family of 5,000 produces by the end of June 250,000 more phylloxera; the third generation the number would reach 62,500,-000,000, and there are five or six generations in the year. These insects go to the root of the matter, bidding adieu to the leaves in June and journeying to the roots as rapidly as possible,

There are several recognized methods of conducting the battle. The one that is adopted on Messrs, Gilbey's estate in the Medoc is thus described: First, a large quantity of water has to be pumped up from the river, which is distributed over the vineyard by miles of piping, laid methodically along the course of the vines. The date for the commencement of the treatment is about the 20th of March, and at that time gangs of men and women are employed preparing the holes (cuvettes) for retaining a solution of sulpho-carbonate around the root of the vine, until the whole has been absorbed by the soil.

The pump and tubing having been put in position the work of the treatment is carried out by six men, each followed by a woman having a supply of ten to fifteen pints of sulpho-carbonate and a measure holding a little over two ounces. In order to insure the methodical working of the A young man called vide panier, or bas- treatment the signal to commence is usu- grapes are gathered in the month of Oc. Europe and the Eastern States,

ally given by means of a whistle connected tober, and preserved in enermous underwith the steam pump, and each man then starts by filling the cuvittes with a quantity of about two gallons of water, into which is poured the dose of sulpbo-carbonate of potassium decided upon, a further quantity of water theu being added, until the cuvette contains in all from about three and a half to four gallons of liquid.

The Chatcar Londonne, formerly belonging to the Viscomtesse de Marcellus, was purchased from her 1875 by the Gilbeys, for the sum of 700,000 francs, and they have since the purchase expended a further sum of between 600,000 and 700,000 francs in the formation of a harbor on the Gironde, and the establishment of large and important farm buildings, the erection of cottages for workpeople and the building of a new cuvier and extensive chais, these latter capable of holding 10,000 hogsheads,

This firm is naturally very proud of the gold medal which was awarded to it by the French Government for the best cultivated vineyard in the Medoc, an honor that is without precedent. Next year those curious about vineyards will be able to see a remarkable model of the Chatcau Loudenne at the Paris Exhibition.

TTALIAN WINE.

Vice Consul Pariender, in his report on the Barletta wine trade, says: "The total amount of wine export d during the past year, inclusive of the traffic by rails, was of 75,000,000 liters, valued at 25,000,000 francs, this being an increase of fully 5,000,000 francs on the preceding year, The Barletta wine is not fit for direct consumption. It is heavy stuff of dark violet red color, containing 14 to 15 per cent pure alcohol. It is used in France for mixing with light French wines, and for this purpose it is also brought in Germany and Switzerland, though in considerable less quantities. Wine is the only product of this district, and its importance is realized from the fact that the cost of a piece of land with vineyards is ten times as much as that with cornfields or meadows. The duty of 20 francs per hectoliter imposed by the French Government on Italian wines has made it impossible for this country to fight in French markets against Spanish, Algerian, Portuguese, Greek and Hungarian wines, which pay only the old 2 francs per hectoliter. An immense quantity of wine is now here without buyers, and, naturally enough, the price has so fallen down that it searcely pays the expense of gathering the grapes. While, in the beginning of 1887. the cost of a hectoliter of Barletta wine averaged from 30 to 40 francs, it now scarcely reaches that of 8 to 10 francs. It is impossible to anticipate the consequent of such a ruinous state of affairs. It is certain, however, that if it were to last, this district, considered only a few months ago one of the richest of Italy, will for a long number of years be one of the poorest. A sort of brandy, " eau de vie de mare", is produced in this district from the dregs of pressed grapes. It is a crystal white liquor containing 50 to 60 per cent pure alcohol and smelling heavily. It is sold in France and North Italy, where it is used for direct consumption among poor people and for making spirits and cognac. The quantity produced, of nearly 15,000,000 liters, goes three-fourths to North Italy and one-fourth to France. The process for making it is very simple and old-fashoned. The preased

ground reservoirs, where they are protected against the air. During the winter they are brought, as wanted, from the reservoirs into big copper boilers, where they are mixed up with water and boiled until the alcoholic vapors form themselves. The vapors are then condensed, and the produce thus obtained is brought to market without further manipulation. The dregs and water left in the boiler are then pressed and the water substance thus gained is led into wood reservoirs, where it forms, by cooling, another important article of export-namely, halfrefined tartar, of which about 450 tons are thus produced every year, worth 1,000,000 francs yearly, and which are chiefly exported to Germany, France, the United States of North America, and England also, though in very small quantities.

THE RAISIN CROP.

California has good cause for feeling jubilant over the raisin pack this year. Not alone for the increased output, but, observes the Los Angeles Commercial Bulletin, for the preference with which they are being received at the East. Boston and New York dealers are willing to and are paying more for them than for Valencias. The Calitornia raisin is this year more uniform than ever before, is of better color, freer from dust, and the stems are unusually bright, thus evincing that greater care has been taken in curing. The result is, far better prices are obtained, and that a feeling of confidence has been established among the Eastern buyers. London Layers are bringing 15 cents per box more than last year, although the pack is very much larger.

A significant fact in connection with the industry this year is that grape growers instead of curing their own raisins have turned them over to regular packing houses and this had not a little to do with the great improvement noticeable.

Localities have but little preference over one another. The crop of the Santa Aua valley is good as far as quality is concerned as that of Riverside, and both are inferior to that of Fresno in point of size of herry and quality. The output in the Santa Ana valley may be estimated as about 60,000 boxes, a very large increase over last year, though not by any means as large as was expected. The crop of grapes last year was very much larger than this, but rains occured just at the wrong moment and the raisin pack was reduced to a minimum. The total pack of Southern California will aggregate somewhere between 300,000 and 350,000 boxes, of which 200,000 boxes must be credited to San Bernardino county. The proportion of "layer" raisins in Southern Californa is much larger than ever before, as the berry clings to the stem better; the only reason we can attribute this to is the fact that they have been more carefully handled.

As an evidence of the high esteem iu which California raisins are held in the East, we note the fact that they are being sold to a large extent without sample. Heretofore a sample had to accompany every offer, but now brands which were established last year require only a guaranty as to their quality to be readily taken. This is indisputable evidence that the iudustry is on a better footing than ever before,

THE MERCHANT is largely circulated in

FOR WARREHOUSING BRANDY

The full text of the new law extending the warehousing privileges to fruit brandles, with the reasons for its passage are as fel-

Be it shart d by the Schuts, and House of Representatives of the Found States of has benefit and also that whi America in Congress assembled. That the ing to the production of fruit brandy, and first produced, and the Accessive to punish fearls council I with the same," approved. March 3, 1877, be extended and apples or peaches, or from any other from use as toveriges. This ther tore, at any required or har after shall not be repaired ath. Gov inment, but also of the consecurity to the turn per agree than the council to be deposited in a distiffery warehouse Provide I, that each of the warehouse seetablished under such act, or which may should be enacted into law. As a me instehereafter be established, shall be in charge either of a storekeep ror of a storekeep or on there are of public revenue, and is the rectirely uncalled for and she is the oband going it at the discretion of the Com- fore, properly speaking, a revenue in as missioner of Internal R venue.

Approved, October 18, 1888.

In the S nat of the United States S nator Vance, from the Committee on Pinance. $\mathbf{s}\mathbf{u}\mathbf{h}\mathbf{m}\mathbf{u}\mathbf{t}\mathbf{e}\mathbf{d}$ the following report:

The Committee on Tinane, to whom was referred the bill. S. 70 to provide for warehousing fruit brandy, have had the same under consideration and report,

The law relating to the war housing of privileg a to producers whose necessities time our enterprising town was asset plusage in the market on account of the and the quirty of the fruit. heavy burden imposed upon them. Only in many cases also were throwing away or per pound or \$3000 for the whole. them to place their branches in special at all. In usual estimate of the apmediately revived, instead of uprooting bearing-say three years as about ragvines, more were planted, many distilleries. \$13 per annum. It will that for the s products. Distillation of brandy from fruit be more than double I the next year otherwise. It enables the vine grower to S had will soon have its proking houses? waste substances, as are left over after exother residuum of the wine press.

Practically the same necessities now pro- cess is assured in many ways

vail in all fruit growing district-. quantities of many kinds of fruit, bure pecially apples and peach scare bond into ized through distribution, but owing to the fact that no bonding privileges in extended to this class of products there as a comby An Act to provide for warehousing fruit great hardship experienced from the Lay ing f the internal revina tix penth. same but also great meaning to fion spirits into a bid for consumption is a viprovisions of an act entitled " An act relate ted and collect 1 at the time the god is at some, owing to the imposition of the fax, causes hold rate for eithern per the man per to The average pro-fer are gogmade applicable to beauty destilled from lettling before they are matured a latter a that this bid extending toos ton in a provincials in the great pourse Sicbiges to the problems of front branch's shows that it will not be to pay prevent fraud it would certainly result in Tepression of prices for winger

> This mashe passed the Sanab in th last Congress. Forty mutho and year onemittee again recommend its passage.

- -REMARKABLE LIELD OF GRAPES.

It is but four years sine experiments in raisin growing in Fresn county malicated that the business would fit we a score se. The vineyards at that were principally grape branches was passed in order to grant the ated in the vicinity of Fresno. All that were identical at that time with those of hilled to is "S line Switch," and we had the producers of brands show derived from just achieved the proud distinction of hav other fruits. The object of this law origining a posterfice at this plane. Land can reually was to enable distiflers of grape spir- were busy building ditches and patting its to keep in bond, without paying tax, for their hands to erchard and alfalfa. Since three years, their products until they that date more attention has been given to should be sufficiently matured for the mar- the culture of the vine, at timer a specially ket. Prior to the passage of this law the the raisin variety. The lands about S thin distillers of grape spirits were required to have been tenul to be admirably adapted pay the internal revenue tax on the same to this industry, and the results of the fourt growers in the points that they be a at the time of distillation. This requires young vin yards hir abouts ari of the mist ment of his imposed such one rois data's satisfactory and thatering character. This (19ths d in the interests of their pad so upon producers that many were prevented mowevalent that when they reachfull bear some. Especially is this true of arches vin from utilizing wines which were assful only lung they will compare with any in the State | for distillation, or which constituted sure both is to the amount produced per acr

As evid now a three forts after than a few who commanded sufficient cipital called to the Maple Part Vin yard in the were able to pay this tax at that time, as Wittram Colony west of Missrs, Righly A. they were compalled to hald such goods. Sobman put out rightly-four acres to rusin sometimes for a conciderable period in or-vineyard. They used cuttings for the purder to mature them for consumption. At pose and cultivated the vin yard in the that time wine growers, especially in Cali- usual way. This fall they have here stid formia, were much disheart ned, and in and sold from that viney and thirty six tensome cases were appropring their vines and, of raisins, for which they received 5 cents destroying their wine products which could shows a gress income of \$42.50 per a renot be otherwise utnized. The practical from a vineyard that undraw heavy irvalue of the law which was passed to enable counstances could not be expected to be at bonded warehouses was speedily demons of a tring out an acre of vin yirl, while strated, the interests of vino growers into cuttings are used, and of bringing it is were established, and the market now is that this viney and has more than parties well supplied with choice and well matured penses the present year. The gray should test soft the people of the least inenables the producer to utilize material plain, then, that lands in this vicinity parwhich may fail to find profitable markets to vineyards will pay. It is also plain that obtain profit from inferior goods which are handle the fruit, will furnish employment not equal in quality to standard articles, for women and children at light work in and also to derive some benefit from such packing fruit, and add in demany to the waste substances, as are left over after each business prosperity of the town. The beam pressing grape juice from skins, seeds and in Solma lands and lots has not began. The future is full of promise in a brespects. No one need fear for the future, for sie-

SOSOMA GRAPE GROWERS

D. B. Weit, a corr spon; nt of the R. $P(\phi)$ at an article on $S(\theta, \phi, x) = a(y)$ prisses the belief that its from who in , at no sur, lip nd as host and

It is now there if he says, the same gray is a rop is as staple as the comtontaid I mais. The same graph arry do over the exercise. But sickwise grap sometime court his surp is rivoled there is a is \$5 a tone. This 11,521 do 25 2000, 1,5,2 the brandy distilled from which is not now to the interest not ency of the professional sometimes as a more holder to the for Lin I to grow with graph of a r saids from several causes, him taken poor with , a west of property in graposznoworstonarcforacificty for their crop, a mearly entire want of gamzation among grapo growns for t purposes of opening up in a channels trab and other uses for their mag shi product, Want des perige in Italia vists tin flot, in amousting there is a visin every point for earlying for a callege or dish tuning or quality results a his ourng ment coming the wire-grapgreaters, and great a season for there thousands of time of most magnetical grapes that will never be harvest decorages shid, if half of them had be near the In I and play I on the world's mark t would had brought at least do it. the perthat the win rise in affect to pay for th with the pr s at low prices of wive.

> "I found no faults with a noma social itson as I's my, but I is I with him you in i In rolly take and read the papers that in growing. They grow the grapes and it I so I entirely on the winery to give to be market for them. Wineries are not a six false, agh, to y have not kept poor wit the continual mercase of profounding their fore the growers to complet ly in their power. The winerescing to the map is they can possibly handle at any pression have the mind to pay above the a parking and handing. The growns our and their graphs and sown, they are not pulpared for it, so they are comput by it them report the wineries, and they most sell, they must have money

> "This is a very unfortunate position for a great dask of people to being. We cannot partials, blame the wire ry man, to a thorso ms to be an overstock of air an expensely of poor wine, and win a line a relief in the future in sight 1. The coname emp , the Zufand I I in. from my knowledge of the back vectorisks a fred fruit that we are concerns and ready sale there so the rest

Iro Egrapes, not rusins of a partition would bring the grape error rist and for its the price the grape-growers of Sonic county are now gitting.

Both wine grapes and table trapes as this crop, somewhat shorten. I by sall our and that one little show riof rate. This shows conclusively that Smoma county wants no summer or early full runs.

Of the other fronts and the fittill prosand finite growing I was any mother

ERLIT PACKING,

att f a ng a nated to fruit-posterio

and the thirt and the thirty

r., 1 - - -

that at the light most ability and the removable indep All of South Australia state that the wide is as a stelled eryrs, to the Existence all from the first grane were the the consentament is hope policy of The Algorithm of the Waster spec and good, and in many cases the had been a minor of 1 from the is the first, specifically for market, aptos hady for which has been been and Charles foliation This, of a urse, of the standers what would have 24s. - 1 fr 10s or 17s. I so cludy a distingle by profitte blog, a reason was procedured from the sold at less per sometime the best on of his ses places see inferior front for the pripes of garage, and the consumer, the to the common wait the retained in 1 er du lans fill you have good of paket tog the rand giving only proce, of the should true for what it is s oth, When our a marchant finds he as to by I a poor attely from the shipor he is no no lite and that man a wide one solds are can be satisfactorily aspland, and whith a hors not suished o population safet gods regrot. Hills transpirating will pay the lest in agrain, and we hape our Western and South ruler (vers will not more sight of

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On a mut at its holth and obligation there shows, I off rites H. I pror Lorent Short S. my weal-known Burgundy Vincente, satisfied S. W. of Santa Clara-Ave, the I st wine district kie who contains sg 150 acr s of lov board, and planted inhe best virilities. Fifty per sit do inct. his area Bargandy, and the other fifty or sin 8 maron and Rouss il in s, in full aring or will be so next year

Lensy insibe parties will give contract r five or ton years. To bars are equipped cut to best steam machinery and fishilry. 270,000 of coping, oak and rodof 1. It plus must be son to be approcat. i. I carr cly to give immediate pose so all and will mak a positive scientific t appoint for at ones 45 0,000 gallage of with a wines of vintage of three store may greath the pace if so desire L.

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A FLORIDA GRAPE CROP.

I am reminded, writes Mr. T. K. Goodby, of Waldo, Fla., to the Frields Inspetite that I promised you to give an account of my little crop of grapes for this season, and in doing so I will not go into any speculation as to what grapes ought to do, but will simply state what they have done Three years ago last Pebruary, 1 set 136 vines 7x7, which gives 888 cmes per acre or a little over one-seventh of in acre for 130 vines. I have gather dathere paying cropfrom thes wires and give an account of this, the third crop, as fellows: Hartford prolific, 36 vin s. 150 pounds, Ives, 30 vines, 223 paraids, Gostha, 36 vines, 502 mixed for, 22 vm/s, 100 pounds, nadding a total of 1.245 p in is for the 150 yrass. used 100 pourds for july, who, etc., and sold the rist for \$148,04 in t

I have been grown g grap a here for the past five years, and say they demunch better here than in Missouri, my nativ. State. 1 have test diabout thirty of the booking varie fies and give my protocore to the Ives and Delaware for mark transporting Goodie and Concord for home use. I trun my vines to stakes and like at much bert a than to le lis. I have in difform and can say that on stakes the front is better protected from the RESISIANI GRAPE VINE STOCK, in, rain and birds, and the vin season to militate and manage generally.

GRAPES IN NEW YORK

The Oct police by Fig. dea of over-probacion of graps. It is not over prediction, but and reconsump ion. How can there be an over production of grapes when there are thousands of famiies all over the country who have done and are willing to pay a fair price for them. Growers must first attend to the matter of iew markets. Next in so far as possible hey should see that the grapes are sold at easonable rates and not at probabilities rices. The latter is often the fruitful caus f non-consumption. In Port Jervis, N. Y. ive years ago a half-ton of graps would ompass the entire sales. This was not beanse the people did not want them, but ecanse of the absurdly high prices the ealers kept them at a lithrough the season. arrangements were made for supplying the tablic with grapes at a profit of about 10 ents per ten pound basket at retail, and he consumption was trabbal the first seaon. Now it is safe to say that hiteen rous re annually consumed in addition to the nantiti s grown in gard is.

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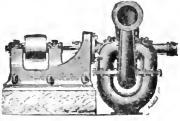
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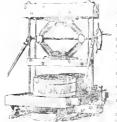
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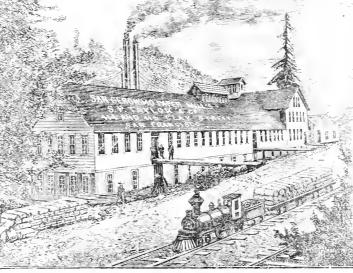
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VOL. XXI, NO. 6,

SAN FRANCISCO, DECEMBER 7, 1888.

PRICE 15 CENTS

ITALIAN VITICULTURE.

THE VINE, WITH CHARACTER-ISTICS OF WINES.

An Interesting Account of the Wine Industry, furnished by the General Italian Wine Growers Association

The kingdom of Italy, comprising an area of 286,588 square kilometres, lies within those parallels of latitude wherein the cultivation of the vine is not only possible, but, as a rule, easy and remunera-

Separated from other European countries by the Alps, and traversed throughout its entire length by the Appenines, the Italian peninsula possesses almost every kind of climate in which the vine cultivation can be carried on. Moreover the rainfall in different parts varies greatly, and accordingly a great deal of variety exists in the character and quality of the wines produced. The greatest altitude at which the vinmay be successfully cultivated is about 500 metres above the sca level, but in some parts of the Alpine districts grapes are produced at an altitude of \$00 metres, and in Sicily at 1,000, but the proportion of the wine made at these high ranges, which is necessarily inferior, is inconsiderable, and is consumed at its place of growth. Official statistics show that 82 per cent of the popus lation of Italy are more or less directly dependent upon the vine for a livelihood, and of these only about 151, per cent, cultivate vancyards between altitudes of 500 and 900 metres, and only about 2 per cent. above that range

About the year 1860 the oldrum broke out and disastrously affected the Italian vincyards. Then, for the first time, Italy became an importer of wines, its importations equalling, and sometimes exceeding, the quantities exported. The oldbin, however, was soon, brought under control, and since that period the cultivation of the vine in Italy has been largely extended, at first to meet an enlarged suternal demand, and of late years on account of an increased foreign demand, especially from France, whose vineyards have not been able to supply the wants of the French people and their foreign commerce in wines since the

unfortunate advent of the Phylloxera. some provinces the cultivation has, for various local reasons, fallen off, but the following table shows how targely the aggregate production has been increased. the kingdom being divided for this purpose into twelve agricultural regions, in which elimatic and other conditions of cultivation

Decrease, Increase, Rectolitres,	10.00 (10	82 9,178,267
Decrea	222.7.302 1,200(2)10 222.7.10	1,1604,9182
Annual Production, 74. 1870-83. Rectolitres.	1,002,800 1,668,000 375,600 2,186,000 2,186,000 2,186,000 1,817,600 1,817,600 1,68,15,100 1,68,15,100 1,68,15,100 1,68,15,100 1,68,15,100 1,68,15,100 1,68,15,100 1,68,15,100 1,68,15,100 1,68,1	27,134,525 35,173,600 1,454,382
Annual Production 1870 74. 1879-83. Herblitten.	2,706,196 1,815,302 1,815,302 1,915,410 1,917,345 1,917,345 1,917,345 1,917,345 1,917,345 1,917,345 1,917,345	27,10,6,525
Region.	1 Firehmont, Loudbard), R. Venedia, R. Venedia, Final A.	Totals—He (oltres., ., 27,1/0,525, 33,173,600) Net lucross.

The increased internal consumption of Italy is ascribeble to the increase in the population, which is estimated at 6.19 per 1,000 per annum, and to the general smelioration of the condition of the people. The following table shows the quantities of vine imported into and exported from Italy for the tru years 1877—1886;

Total. He telling.	525,057 1,063,114		2 3861 2003 1, NEGO02 2 3300 900
Exports, To other Compties,	20 T 50 T		141,563
To France Hertehtrea,	100,015 170,015 170,015 170,015	1,425,190 1,126,853 1,126,853 1,127,153 1,137,	1,550,040
laports.	100 mm	\$1.55 450 450	11.4 28.5 28.5 28.5 28.5 28.5 28.5 28.5 28.5
Yerra	1: 1 2: 1: 0: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1	911111	777

The stande product of Italian vineyards. whether for home use or exportation, is Red Table Wine, and those planted of late | b cause there is less need of alimentation. vears have been for the most part for the production of red wine, which is rapidly mercasing, and in many cases at the expense of white wines. For purposes of export, when the wine required is used as in France, for blending purposes, a strong concentrated red wine is produced, the trade in which has become considerable It cannot be said of all vary ties of Italian wines that their produce has increased, but in all cases efforts have been made to improve their quality, and this with a very great degree of success. In the plans of Northern Italy, where the vine culture was associated with that of other products, the results attained being irregular and unsatisfactory, the culture has been diminished. while in other regions in which the vincvards are more intelligently cultivated, and devoted exclusively to the production of wine, it has been increased, the result being a very manifest improvement in the average quality of the produce. The substitution to a large extent of factories for small producers has also contributed to this result. the factories purchasing the grapes of the small growers and fabricating a wine of uniform quality, in place of the unequal and inferior wine which small proprietors usually turn out of their presses.

Prices generally have fallen, owing to the cularged a roduction and to mereased facilities of transport. Their tendency, now however, is to become firmer and steadier, as increased means are afforded for the storage of wines. In times past the production varied from year to year very largely, as it always will vary, and the facilities for the storage of common wines bound york is stricted, prices naturally thretuated to a much larger extent than would hav been the case it the supersbundance of one season could have been more commonly used to supply the differences of another.

The consumption of wine in Italy variconsiderably in different districts largest quantity is consumed in the vinc growing districts and in the cities, and is always proportionate to the rate of wages paid. The average consumption has already reached 170 littles per head of the population per annum. It will be generally found that the consumption decreases

accounted for partially by reason of the wines being more alcoholic, and partially The consumption of wine also varies with the seasons. For instance, in the summer it is small, many people, during excessively hot weather, proferring beer, lemonade, sweet acid and aromatic drinks.

Foreign beer does not however, greatly affect the consumption of wine, as it is consumed by a very small number of people.

In Italy it is customary to the cultivators to have a direct or in lirect participation in the production - this system is known in Italy as cobero, mezader, neissaro, piccolo affitt arrio, etc., and the cultivator, when he cannot have the first wine, has the secand for his own use. This system of making second wines is also adopted by some of the small proprietors, who keep it for their own consumption and sell the first.

It is only a few years since the Italians have been persuad dath dawing instead of being produced only for local consemption, might be mad, an object if at usive trade, and the proprietors of the viney rds are now turning their attention to the best methods of giving the culture an industrial character. Their first offerts were directed to increasing and unproving the vineyards, and they are now looking to their cellars, easks, and enclosical implements. The spontaneous movement of the country in the wine industry has been emergetically helped and sustained by the public administration, which has established various institutions for the study of wine viz., an (Enclogical School at each of the following plac s:-Conegliano, Avellino, A lei, Catama, and Cagliari: a wife testing station in Asti, experimental wine cell irs, and traveling professors, confer nees up in the matter of prices, &c. Moreover, the Government have sent to some of the most important commercial coperiums of Europe Munich, Lucerne, Paris, and Londons qualified examiners, for the purpose of analyzing the Italian wines, and ensuring a good success for the products sent to the markets there, and also to study how termer ascand establish a serious wine trade between Italy and the respective markets of consumption,

The Phylloxera has until now been less destructive in Italy than in most other wine producing countries. The disease has, up to the present, been limited to a few numportant localities, Sicily excepted is we get towards the south, and this is The whole Peninsula from Venice to the extremities of Calabria, is as yet free from its presence. In fact, it is reckoned that the total vine-cultivated area lost to Italy by the Phylloxera does not exceed 400 hectares, and of this the greater part has been d stroyed intentionally, as a defence against the disease.

The most important markets are held once or twice a week, and sales are held in places specially selected; but what are knowu in France as syndicats are very little known in Italy. Agents and brokers can be found in all markets; in some there are With realso laboratories for analyzing. gard to the commercial usages of each locality, it will be most convenient and advisable to write to the Chambers of Commerce or the municipalities there.

We shall give more detailed information with regard to the twelve agricultural] regions of the kingdom under separate headings; and in order that the importance of each wine department may be appreciated, we will quote from statistics carefully prepared and published by the Ministry of Agriculture and Commerce, the average production therein from 1879 to 1883, the particular average of each district, and the proportion of wine produced and consamed per head, assuming that the whole production was consumed locally. If we reckon, therefore, that in the Northern and Central provinces the consumption of wine amounts to 110 litres per head, and in the Sonthern provinces and Islands to 60 litres per head, we shall see what is the superabundant quantity of wine which each dis trict is able to export.

PIEDMONT.

During the last thirty years, Piedmont has made a considerable advance in the wine industry. A large portion of the plains which are traversed by the Cavour and other smaller cansis, and which were cultivated with vines and trees together, has been abandoned, and the vine cultivation transferred to the hills and tablelands of the Appenines and lower Alps. Piedmont has, for some considerable time past, produced much more wine than is required for the needs of her own population, the aurplus being sent to Lombardy or exported by sea or land.

Red table wines form by far the largest portion of the produce of this district, and the wines produced between Cassle and Valenza are of such an intense color, that they are used very extensively for blending purposes; but they posseas less alcoholic strength than the wines of South Italy.

Dry white wines, however, are not absent from the products of Piedmont, nor are those which are classed under the head of " Special" wines, anch as Caluso and Ciambava, which were once famous, but now find close competitors in the exquisite Sicilian and Sardinian winea of similar type; but growers are making very great efforts to maintain the reputation which these wines have so long enjoyed.

Asti and Canelli, two principal winegrowing regions, produce a Special wine known by the name of Moscato, and which ia produced from concentrated must, also sparkling wines; but these are beat adapted for preparing the hetter qualities of Vermouth.

The Red Table Wines must be regarded as the most important product of Piedmont, and of these the finest are Gattinara, Ghemme, Barolo, and Nebbiolo, wines which are rough when young, but strong, and with a delicate bouquet when matured.

less body than the others. After these France. come the wines made along the valleys and on the hills of the Appenines, as far as Novi and Acqui, which are light, full bodied, the district of Asti, the best brands of and sometimes sweet. Here may be found | Italian Sparkling Wines, red wines in large quantities, to suit all tastea, and, with careful blending, to gratify the nicest palates.

The produce of vinewards situated at the foot of the Appenines are ready for local consumption within three or four months after being made. The wines obtained on the hills improve very much with keeping. the earliest ready for consumption being the Barolo, after this the Ghemme, and then the Gattinara, and Lessona. In Lombardy. these wines when between five and ten years of age are considered invaluable for invalids and those with weak constitutions.

The producers of the province of Alexandria sell a large portion of their grapes, for which the most important market in Italy is Asti. The salea here commence at the beginning of September with Dolcetto and Moscoto grapes, and end in October with the later ripening varieties such as Burbera and Nebbiole.

Piedmont also possesses an excellent organization for distilling the wine refuse; in Alexandria especially several good establishments produce brandy, argol, and tartaric acid.

The prices of the common wines are generally moderate and steady, as the proprietors almost always have a certain portion of the old wine left when the new vintage comea in. In the last two or three years the competition of wines imported in large quantities into Lombardy, from the Abrazzi and Puglia, caused a decrease in the consumption of Piedmontese wines, which previously had been almost exclusively used. The production of wine in each province will be seen from the following figures:-

	Hectolitres.
rovince	of Cuneo 870,400 Turin 770,806 Alexandria 2,429.800 Novara 324,200
**	Alexandria2,429.800
"	Novara 324,200

The production of each province aubdivided into the districts of same, and calculated in proportion to the population, give

the following:-	J
A	verage
produ	action per
	of the
DO	pulation.
· ·	Litres
Alha	
Cuneo	
Mondovi	
Saluzzo	85
Average per head for the Province of Cune	0 137
Aosta	
lyrea	55
Pineralo	
Susa	
Turio	21
A	37
Average per head for the Province of Turis	1 3/
11	362
AcqulAlexandria	
Asti	
Casale Monferrato	
Novi Ligure	
Tortona	
Tortona	200
Average per head for the Province Alexand	Iria 333
Average per head for the Frontiec Meximo	
Biella	60
Domodossola	
Novara	
Pallanza	
Varallo	
Vercelli	
, creem	
Average per head for Province of Novara	48
Average wine production per head in Piedu	ont 143
The chief towns of the Piedmont	ese dis-
tricts are all connected by rail wit	h other

The cellars are generally constructed Following these are the tonic wines which is fermented and the butts in which it is cheap rates.

are a little harsh, as Barbera, Freisa, and stored are made of strong wood; and the Delcetto, the last being milder, but with processes adopted are modern, as in

> Besides Clarets, Piedmont produces the best and finest qualities of Vermouth; and

> The following table gives the analyses of some of the brands;

	Alcohol	Acidity	Dry Residu
Qualities. per	per cent.	per mile.	per mille.
1	12 to 14	8 03 1	20 to 23
_	F1 :: 61	G-5 * H	21 * 30
	1 " 13	6.5 * 7.5	22 * 28
	11 " 13:50	2.8.5	12 : XI
Barbera16 5 " 13	. 13	9 9	20 26
Grignolato	12.5	t- : :	-
Doleute 10 " 12-5	12-5	:	18 128
	11:2	6.2 - 5.9	
	8.0 10.0		17 4 21
Common Willes from the Lower Alps 9 "	= : ::	x : :	10 : 5
	13 ' 15	00000	02 05
	2 : 11:0	6.9.0	19 * 24

In their chemical composition Piedmontese wines resemble those of Burgundy an I Bordeaux. Some varieties are even more alcoholic.

Following are the names of some establishments or wine growers who can be recommended, and many of whom export their

Giovanni Beccaro, Acqui, red and special

Msrquis Giuseppi Pineli Gentile, Tagliolo, red wines.

Luigi Menotti & Sous, Acqui, red wines. Marquis Landi, Roccsgrimalds, red

Borgatta Brothers, Roceagrimalda, red wines.

Cav. Ginseppi Casoletti, Alessandria, red

Liprandi & Moriondo, Asti, red and special wines.

Eredi Gio, Boschiero, Asti, red and spark ling wines.

Baron Saverio Oreglia d'Isola, Carru, red wines.

Cav. F. Tarditi, La Morra, Barolo and other red wines.

Cav. Luigi Para, La Morra, Barolo and other red wines.

Matteo Fissore, Bra, Barolo and other red wines.

Marquis Armando Federici, Chieri, common red wines.

Francesco Cinzano & Co., Santa Vittoria, Vermonth and Clarets.

Cora Brothers, Costigliole d'Asti, Vermonth and Clarets.

Gancis Brothers, Canelli, Vermouth and sparkling wines.

Romero Sartoris, Turin, wines.

G. B. Porazzi, Novara, for bottled wines, especially from Gattinara, Ghemme, Lessona-places where the property is much subdivided, and where it is seldom possible to obtain wine in large quantities for direct exportation.

In all the above-named establishments, parts of Italy, which materially facilitates a large quantity of wines of medium qualities are also made. The common wines or grapes themselves, may be purchsaed on underground. The vats in which the must the property about the vintage time at very

This is one of the regions of Italy in which the cultivation of the vine has considerably decreased. The reason of this is that in the moist places the cultivation of grass, and on the hills, that of the mul berry, has been largely substituted. A small cultivation of the vine upon trees still exists in the dry districts of the provinces of Mantua, Brescia, Bergamo, and Como; but the wine produced at the firs and last named places, from its harshness frequently fails to satisfy the taste of con sum rs in the towns, who are favorable to the more alcoholic and agreeable wines o Piedmont and South Italy, Therefore when there is an extraordinary abandance of grapes, as was the case in 1886, the wines of this region commin louly ver low trices.

The hills of Bresch and Bergamo producexcellent wines, which are much sough ofter by local consum rs-30 much so, tha t is not possible to obtain large quantitie t a sufficiently low price to allow them to e exported. The district of Sondrio, or Tallelling, which is situated on a sun iv slope of about 100 kilom tres, produces such good wines, that from viry ramote time they have been the most appropriated quali ties in Switzerland, whither they are exported in large quantities. This is the only prevince of Lombardy which may be said o have an established export trade, about in half of its products being exported When the remainder is not sufficient for it own consumption, cheap wines from other egions are introduced. Almost all the wines of Lombardy are red table wines which, on account of the acids they con tain, keep well. The wines of Valtellin are undoubtedly of a very superior type and have taken the highest awards at sev eral Universal Exhibitious.

The Province of Pavia is a hilly district of the opposite bank of the Po, which pro duces very nice table wines, principally red The best producing districts in this prov ince are Voghera, Stradella, and Bohbio which, previous to 1859, belonged to Pied

The following table gives the result of the analysis of several Lombardian winea:-

Acidity Dry Residue				18 : 2:1				
Acidity		6.5 to 8	6.5 : 7.5	9.2 :: 9	5 6.7	æ:=	13.00	0:0
Alcohol		11 to 14	95"12	£ : x	9.6 1	: : :	£ : 30	1: 1:
Districts and Qualities of Wines.	Red Wines	Valtellina	Вгенсіа	Bergamo	Como, Milan and Montus	Stradolla	White Wines	Wines from American Stocks

The average production of wine in each district is as follows:

	Hect olitre
avia	522,300
lilan	!#1,200
omo	82,700
ondrio	138,600
ergamo	87,800
rescia	218,000
remona	$\dots 257,800$
[antua	260,100
Total production of Lombardy	1,007,000

Dec. 7, 1000	
	Arragi
	products so
	With per-
Districts	Litros.
Vocher	351
Bobbio	1.10
Mrtara	. 12
Voghera, Bobbio Mrtara Pavia	10
Average for the Province of Pa-1a Abbiategrasso Gallarate Milan Losh Monza	. 111
Abbiategrasso	11
Gallarati	15
Milan	126
Monga	-5
Average for the Province of Malin	
Como	15
Varent	21
Average for the Province of Comp.	18
Average for the Province of Sondr.	115
Bergamo	31
Treviglio	
,	5
Average for the Province of Bergamo	
Breno Broseia Chuari Salio Salio Ve.olanuovo Chuari Salio Chuari Salio Chuari Chuari	1.7
Brescia	50
Salo	100
Ve.olanuovo	15
Average for the Province of Brown	
Casalmaggiore	3aa - 20
Cremona	65
Average for the Province of Cremona	
-	
A sola Bozzolo Cauneto sull' Ozhio Castighone delle Stiriete Gonzaya Manusa	109
Cauneto sull' Orbo	139
Castiglione delle Stiriere	11
Gonzaga	127
Mantua	- 77
Paras.	35
Gonzaga Mantua Ostiglia Revere Semide Visilina	191
Volta Magitovana	162
Average for the Province of Mantus :	55
Average production for Lombardy .	15

The production of each district of the above provinces, and the relative population, give the following averages of production per head:-

The following establishments in this locality are recommended both for their products and systems of business:-

Societa Euclogica Valtelliucse, Sondrio, Domenico de Giaconii, Chiavenna.

Coopmans & Co., Montelimpino, near

Giuseppe Ross-tti, Isco (Brescia).

Societa Enologica of Mantua.

Francesco Cirio, Stradella,

In Milan are large wine merchants who trade in wines of different countries, but until the present, almost exclusively for the consumption of that town.

Following are names of the most important of these

Crosti & Borsa, 2	libin.
Guetano Belloni,	+ 5
Fratelli Camurati.	* *
Michele Cusci,	**
Frat, Dondena fu Pistro,	**
Frat, Dodena fu Ambrogio	
C, & L. Fratelti Francioli	, .,
Leopoldo Paredi,	**
Serafino Riccardi,	à 4
G. Fratello Ruffa,	4.1
Ambrogio Zonda,	* *
Francesco Carvi,	Lodi,

AN KDITOR OFTH THELE An exchange says. " A revivalist recently requested all in the congregation who paid their debts to by all odds the ablest and fairest religious rise. The rising was general. After they had taken their scats a call was made for those who did not pay their debts, and one solitary individual arose and explained that he was an editor and could not pay because the rest of the congregation were owing him their subscription to his paper."

INTEMPERANCE.

The Causes Which Lead to It and Its

The widespread ignorance of the caus is of intemperance and of the conditions which induce moltration in the use of alcoholic beverag s, constitute one of the most remarkable, and at the same time deplorable, plasses of the curr ut temperance agitation. Hardly a man one mo to but entertains the most ditermined convictions as to both the caus sand the curfor this particular cvil; and yet the unibated existence of intemperance affects beyond controversy the profound stagnorance of its causes and the complete failure of its innumerable our salls that have been applied. The preacher and the school teacher, the journalist and the lecturer, the revivalist and the feminine crusador are all alike prophets upon the subject and year after year, individually and collectively, "they labor one asingly in the great good work to which they have been called, "But from the Rev. Joseph Cook down to the poor fool who contributes his pennies to a Prohibition campaign fund, what one of them can point to aught save the disastrous failure of his efforts? What one can cite in his support the teaching of a single master mind?

It is this all-prevailing ignorance which makes the progress of tra temperance reform so painful and so slow, and it is prejudice and hate usurping the place of knowledge, that make it so difficult and so dangerous for one who sees the truth to speak it. What phase or idea, for example, is more hateful to all classes of people at present than "free whisky," or "free rum"? It is a cry of derision which frightens the boldest to the cover of silence, and the public man who advocates anything approaching it does so at his peril. Yet it is one of the most obvious facts of all history and experience that abundance and cheapness of intoxicants are always conducive to moderation in their use .

Dr. Felix L. Oswald, writing in the Popular Science Monthly, says:

"It is, indeed, a remarkable circumstance that in the home of the best wines grapes, in Greece and Southern Spain, drunkenness is fur less prevalent than in Scotland, or in Russia Poland, where Bacchus can tempt his votarres only with nauscons vodka.

To the well-informed and unprejudiced mund how plain it is that the reason for this is, that in Greece and Southern Spain the purest and best of stimulants are very plentiful and very cheap, while in Scotland and Russia Poland, except to the aristocracy, the strongest and the poorest arvery scarce and very dear. But Dr. Oswald is not alone in this testimony, nor does the obvious interpretation of his facts stand unsupported, Prof. Albert R. Lodoux, the distinguished chemist of Now York, recently made a professional report upon adulterations of wines and spirits sold as beverages in New York City, and commenting upon it The Christian I publication in the United States, said.

The t stimony of this report is, that the wines sold in the second and third class saloons in New York City are not adulterated to any very considerable extent, ex-

fortified by spirits. This is the second of ally ascertained fact. The natural delition from that fact is that the cheap of reneede in America are so cheap that it dies not be that its put id own instry, be said to The cheap wines have driven the min's fictional article from the market. For sogards of Olds and Califor in.

The master-mind of comomic thought, the man in fact who is recognized everywhere as "the father of political company has attest dother same facts, and need of left their significance in a mann r which off erually sil nees ignorant and captions criticism. In his "Wealth of Nations," Dr. A lam Swith says

If we consult experience, the cheapness of wine seems to be a cause, not of drankenness, but of sobriety. The inhabitants fusion of these times, at most be confessed of the wine countries are in general the soberest people in Europe; witness the Spiniards, the Italians, and the inhabitants of the southern provinces of France

People are seldom guilty of excess in what is their duly fare, Nobody affects the character of liberality of charact r and good-fellowship, by being profess of a liquor which is as cheap as small beer. On the contrary, in the countries which, either from excessive heat or cold, producno grapes, and where wine, consequently, is dear, and a ratity, drunk nness is a common vice, as among the Northern nations, and all those who live between the tropics-the negroes, for example, on the coast of Guinea. When a French regiment comes from some of the Northern provinces of France, where wine is som what dear, to be quartered in the Southern, where it is very cheap, the soldiers, I have frequently heard it observed, are at first debauched by the cheapness and novelty of good wine; but after a few mouths' residence, the greater part of them become as sober as the rest of the inhabitants. Were the duties upon foreign wines and the excises upon malt, beer, and ale to be taken away all at once, it might, in the same manner, occasion in Great Britain a pretty general and temporary drunkenness among the middling and inferior ranks of people, which would probably be soon followed by a permanent and almost universal sobriety.

At present, draukenness is by no means the vice of people of fashion, or of those who can easily afford the most expensive liquors. A gentleman drank with ale has scarce ever been seen among us. The restraints upon the wine trade in Great Britain, besides do not so much seem calculated to hinder the people from going if I may say so, to the ale house, as from going where they can buy the best and cheapest liquor.

And us the greatest of all conomic teach its has thus clearly defined the conditions which make for sobriety, so the greatest of mod ru social philosophers has utter d the profund-st warnings against the stupidity, the tyranny, and the wrong if substituting legislation and correion for the vital principle of individual responsibility. After citing page after page of abortive attempts in all ages, to make man bett r by legislation, Herbert Spencer says fore-fully and cloquently

" No philosopher's stone of a constitution can produce gold-n conduct from leaden instincts. No apparatus of soniters, judg s, and police can compensate cept as cheaper wines are mixed with for the want of an internal governing them, or they are diluted with water or sentiment. No legislative manipulation history of the secretive organis

can ake at an insufficient morality into a sufficient one. No administrative shight of hands in says us from ours lyes,

pay to superfecture species in thous, themselves the rulers of the Mollie Ages: Ith y to d. cell hly ist the reverse of what they intended, for it has turned out that all much as this to may give that his to the discipling of the as int of they with the ant rest of non-yrinder its torias more rigorous and burdensons, 'W must suppress these be this, it sit 4 th authorites of Berlin in 1817, they bil suppress them, and in 1848 the registraria books and the hospital returns providence bers to be considerably worse than befor ."

There will doubtless come a time when the real truth about the temperate question will shine out plainly for all who look towards it; but aimid the darkness and conthat the commet of the light scens to be promised only for generations yet unborn.

GRAPES AS A MEDICINE

Recent investigation and experiments, says the Viorgardist, have proven the graps to combine more hearth-giving and curing properties than any other fruit known, and so mark I have been the results in the curs of both special and chronic discases that in Germany several establishments have been erected under the title of "Grape Cures." It would, indeed, he a boon to our people, who are classed as a nation of dyspepties, if several of these institutions were huilt up here; and where, on this Continent, could such an institution be more pleasantly or judiciously located than on the shores of our beautiful lakes, K nka or Senses? Combining, as they do, purity of air and wat r, charming scenery and surroundings, and above and beyond all, the ripening to perfection of nearly every grape grown. Quoting from the late Dr. Hall (author of several prominent medical works and the chtor of Hall's Journal of Healte, on the healthfulness of the grape, he says. " If the seeds of grapes are swallowed, costiveness is obviated; if the pulp is cat in it is pure nutriment and is soothing in irritate I bowels. If the pulp and seeds are removed, and the remaind r chewed, there is a liquid obtained from the skin which is a valuable astring nt, and if eaten as a whole by the dyspoptic one-half an hour before each mant, in quantity of one-half to two pounds, it is almost a certain cure for the most aggravated form of this disease.

It is a fact, by you'll quistion, that grap's are eaten by the old and young, from early morning until late at night, at all times, in any quantity and under all circums ances. and yet who has ever known a well-authentreated case of sickness arising therefrom? Testimonials from reputable persons living around us can be readily obtained of the permanent cures of many discissis, such as dyspepsia, chronic distribut, debuitty, nervous prostration, less of appetite, from their use

All know, or should know, that the liver is the grad scavenger of the human syst in, and who that is machy or tornal, his use in some form manifests itself, Fruit, and particularly to grap sails in promoting the liver's activity. Their acids punifying the block and a parating the bile from it, which is the 64 assed from the system, thereby scoring a perfect action. In siew of these facts, it becomes aim set a duty anomals in upon acl, particularly parents. to encurse the consumption of the grap on the themse does and children, in faill who in trouble I with dyspopsia or mac-

THE WINE EXCHANGE,

The State Viticultural Commission will take possession of Platt's Hall, No. 216 Montgomery street, San Francisco, about the middle of the present month, and immediately fit it up for occupancy. The objects for moving into the hall are:

First-To obtain more room, the present rooms not being large enough to carry on the new work of the Commission,

Second-To keep up a permanent exhibit of viticultural products.

Third-To establish an exchange where brokers, dealers and producers can meet and effect sales.

Fourth-To provide a means for the public to sample pure California wines and brandies.

One of the leading features of the exhibit will be wines and brandies suitable for consumption, as distinguished from new vintages, suitable only for storage. The object of making such an exhibit would be entirely frustrated if opportunity for sampling was not provided. A free samplingroom would, of necessity, become a public noisance, and one that the Commission would not care to control, Moreover, exhibitors of fine products would not be willing to contribute samples for free use of visitors. After considerable deliberation on this subject the committee in charge decided upon the following plan, which, no doubt, will be satisfactory to all parties interested: A portion of the hall will be leased to Mr. Peter Klein, proprietor of the Occidental restaurant, for a café, which will be open between the hours of 11 A. M. and 3 P. M. In this café a light but firstclass lanch will be served, and also only such wines and brandies as are on exhibition in the main hall. Persons wishing to sample wines and brandies without partaking of any lunch, will have free use of the café-the lunch will he in readisess for those who wish it. The Commission will print the wine list for use in the cafe, which will contain the names of the wines, the names of the exhibitors, the places where the goods may be procured, and the ordinary retail price for cases and bottles. The prices given will be those named by the exhibitors. The manager of the café and his waiters will be strictly prohibited from exercising any influence in guiding the taste of the public with respect to choice of any sample; and to protect exhibitors in this respect, the manager of the csfé will be allowed a uniform service charge, no matter what the price of the goods may be-as, for instance, 20 cents for quart bottles and IQ cents for pints. If a pint bottle is quoted on the list at 25 cents, he would charge 35 cents; if the price of another pint bottle is 50 cents, he would charge 60 cents-his service charge in both cases being the same. Similar rules will apply to sweet wines and brandies as far as practicable, with certain limitations, if they are to be sold by the glass or small decanter. The service charge for serving champagnes will be 25 cents for quarts and 15 cents for pints. The Commission will charge the manager of the café for all samples delivered to him, according to the prices fixed by the exhibitors, and at the close of each day a cash settlement will be required. All exhibitors will have free access to the books of the Commission, and a settlement can be made at any time. It is not the intention of the Commission, at the present time, to make permanent rules, but will revise them from time to time.

In order to economize space as much as possible, the Commission will place on exhibition at least one bottle of each kind of wine or brandy sent for exhibition, and will limit the number to the space at its command. It is not the intention of the Commission to make a display of a large number of bottles of wine, nor to favor any exhibitor by displaying his goods more prominently than the others. The Commission will exercise full control of the exhibits, and will treat all exhibitors alike. The name of the exhibitor, and his place of business, will be placed over his exhibits all such names to be of a uniform style. Further facilities for display of cards and business advertisements will be afforded on the walls of the gallery and in the café. A portion of the hall will be set aside for an exhibit of implements and supplies used in vineyards and cellars.

PRICES.

In order that the system of opening markets for producers shall not come in competition with legitimate trade, no deliveries outside of the hall will be made, and all who wish to purchase additional quantities will be referred to the agencies having those goods for sale; also, exhibitors will be required, when naming their retail price, to fix such prices so that there will not be any unfair competition with the trade. Such prices should be those they offer their goods to consumers, and such as are subject to a trade discount. It is not the policy of this Commission to depress prices, or to encourage the cut-throat policy which forces prices down below the true value of the goods, but to enable producers to obtain fair prices, and to show that our superior brands of wines and brandies can be sold at as high a figure as similar grades of foreign goods.

DIRECTIONS FOR SENDING,

Exhibitors will indicate their intention as to whether their goods are for exhibition only, or for exhibition and sampling. In order that the storage facilities provided by the Commission may not be overtaxed, exhibitors should not send too many cases for aampling. About three cases of each kind of wine would be sufficient at first. As the samples are sold, exhibitors will be notified in time, so that a new shipment can be made before the last is exhausted. All exhibits must be delive ed at the hall. If sent by freight, the ship ring receipt should be sent to some exp. ss or transfer company, with instructions to deliver the goods at the hall. All exhibits should be marked: "State Viticultural Commission, Platt's Hall, 216 Montgomery street, San Francisco, Cal." The contents of each case should be marked on the outside, so that there may be no confusion in opening cases when needed for the café. All samples should be put up into quarts and pints, and a price named for each kind. Exhibitors will notify the Commission the prices at which they wish their goods sold, both for cases and single bottles, such prices, as before stated, to be regular retail prices; and also give their addresses, or the addresses of their agencies, so that parties wishing to purchase larger quantities may be informed where to obtain them.

The Commission will not be responsible for bottles broken in transportation, but will notify exhibitors when breakage is discovered The Commission will also not be responsible for losses by fire or other cause, ness of its employes. All samples of wines development, it will "flourish like a green-

the Commission reserves the right to have an analysis made at any time, for which purpose one quart bottle will be taken, and the exhibitors notified to that effect. A statement of account will be furnished exhibitors once a month, showing the number of bottles received, and the number sold through the cafe.

All exhibits must come ready for sampling; but no win-s, except such as are fi for consumption, will be served in the cafe No bottling will be done by the Commission. All (xtra cases intended for sampling in the cafe will be stored in a safe place, and the best of care taken of them. No charge will be made for such storage.

WINE FXCHANGE.

A portion of the hall will be partitioned off for the exclusive use of producers, dealers and brokers, to serv as a wine exchange, where wholesale lots may be shown by samples, whether new or old, without charge or fee, and where record of wines for sale, and sales effected, may be kept Lockers will be furnished to those wishing to make use of this department for the storage of their samples. In this department, wine-brokers may keep lock-boxes for the convenience of their customers. It practicable, a system of wine sales by auction may become a feature of this de partment. In this department, also, will be provided full facilities for the raisin and dried-grape trade.

READING ROOM

A portion of the center of the hall will be divided off for the use of a reading room, where periodicals, devoted to the wine industry-hoth domestic and foreignlocal and county papers, will be on file.

The Commission have leased a stand in the main hall, where pure unfermented grape juice will be retailed by the glass, in order to popularize the well-known "Grape Cnre."

Parties intending to send exhibits will prepare their samples as soon as possible, and forward them to this Commission early in December, so that a full price list can be printed at the opening of the Exchange. It is hoped that there will be a general display of wines and brandies from all parts of the State; and in order that the exhibit may he worthy of a viticultural State, we ask your co-operation.

> CLARENCE J. WETMORE, Secretary.

San Francisco, Dec. 6, 1888,

A PERPETUAL WONDER.

The grape vine, the Vineyardist observes, is one of the most wonderful things in the whole range of the vegetable kingdom. Its species are many, and its varieties innumerable, as the seeds of every species and variety always produce new varieties, instead of reproducing the kind of vines on which they grew.

And then it is almost impossible to acclimate the vine imported from foreign countries, and introduce it, even with the most careful nurture and culture, to adapt itself to new locations and surroundings, languishes like "a pilgrim and stranger in a strange land," and finally droops and dies, like one stricken with feebleness and homesickness, who vainly pines for friends, kindred and home.

But when native and "to the manner born," if only given a fair chance, and reexcept such as occur through the careless- spect is paid to the laws of its nature and

and brandies must be absolutely pure, and bay tree planted beside living waters," soon do much toward "taking care of itself," and reward its owner's kindly care and protection with an abundance of the choicest of all fruits known to any part of the world -for what can compare with the ripe, luscious and tempting clasters of the vine?

The most marvelous thing, however, about the grape vine, is the amizing instinct, almost amounting to intelligence, which it mainf sts in its s arch for needed moisture and food. In times of drought, it will send its roots many feet away and lown deep into the earth, in search of water, and fully as far in the quest of nutrinou, in the shape of a burn d bone or other ertilizing substance, which it surrounds with a thick mass of fibres, and never aves until all is appropriated, as a quired o its growth and use.

The science of grape culture consists in knowing the nature, habits and wents of the vari tils you are cultiviting, and supplying the soil, and through the soil, the vine, with the proper food on which it ives, grows and yields a full fruitage, year after year.

If wrongly cultivated, placed in a bad ocation, a gleet-d or abused in any way, h vine r sents the indignity, as certainly is can any sensitive human b ing, and dways makes its feelings of resentment known, in a way that cannot be misunderstood; but, if well and properly used and encourages, it never fails to manifest its gratitude, in a manuer equally positve, certain and unmistakable to all intelligent minds. The moral of this great truth is obvious, and needs no further illustration.

MAKING VINEGAR.

Where families have no cider mills and but few apples they may easily make their own vinegar by mashing apples in a tub with a pounder, remarks a writer in the New York World. The pomace should then be put into a half-barrel with holes in the bottom, and be placed over another tub as a receiver. A follower can be placed on the pomace and be pressed down by a lever or stationary weights. The juice should be kept in a keg, hung open, and in a warm place until the vinegar is made. By frequently replenishing as it is drawn out, any farmer's family can easily keep up their stock. A few apples mashed and put in a stone jar, covered with water and the juice of sourcd fruits and berries, can be used for this purpose. Vinegar will stand quite a low temperature, but it is better not to allow it to freeze.

Vinegar from other substances is sometimes made. Wine vinegar is from soured wines and the jaice of grapes. Wine vinegars are extensively counterfeited by chemicals. For sorghum vinegars, to one gallon of sorghum syrup add five or six gallons of water, with a little yeast, or to a barrel of the strained juice of the cane, a pint of yeast and a little syrup.

Large quantities of vinegar are made from whiskey and acids that have a good appearance and sharp acidity, but are unfit for family use. For molasses vinegar, take one gallon of New Orleans molasses and five gallons of water, put in a little old vinegar to sourit, or start it to fermenting with a little yeast. Keep in a warm place and cover the bung-hole of the keg with netting, to keep out the flies. Fine honey vinegar is made in the proportions of one pound of honey to a gallon of water, thor. oughly mixed. For healthfulness and general utility apple cider stands at the head of the list.

FRATOS IN BRANDY.

Vice-Counsul R. S. Warburtons, at La Rochelle, in a r port issued recently on frauds in the brandy trade, says. It has come to my knowledge that extensivfrauds are being carri dom at the expens of English beiyers of Prench branly, who do not know so much about it by scuding over from this country as a cogme, spirits of an inferior and unwhole some kind madfrom potato's in G rmany, and which, if any one cared to drink it, they might de much better by buying the miselyes for what it is, and its proper value. If this stuff were sent dir et to England from G rmany it would be suspected, and therefore, the fraud is carried out in the following man ner: A firm angaged in the brandy trade in London will have a branch horse, or perhaps an ag ut, at Hamburg, or somother place where this petate sprit is mid-They do not send it direct to England, but get it sent to Bordeaux or some oth r French scaport in its proper charact t, and apparently for consumption in France, but in reality with the object of cope aling it origin and enabling it to travel by land to districts where cognac is still produced, an thence to some port well kn wn as an export port for brandy, whence aft ra meaor less ling stay, it is sent over to the hous in London as "Coguae," either on the authority of the bills of lading, or in somcases actually roma ked as such before being put on board the ship. In the latter event, however, it is satisfactory to find not only that the French laws provide punish ments ad quate to the off use, but also that the tribunals are prepared to enforce them. Last year they had reason to know of these practices, and a watch was kept upon a large quantity of Hamburg spirits which had been sent as such to France, and had been subsequently consigned to an agent, there to be sent to London. An examination was made, and it was found to have been remarked "Cognac" after its arrival in France; it was accordingly seized, and a prosecution commenced against all parties concerned. The agents were able to prove that they noted under castructions from the house in London to whom it belonged, directing them to remark it 'Cogna' and were therefore acquitted; but the owners of the spirit were convicted of fraud, and one of them was sentenced to one year's imprisonment, in addition to heavy monetary damages, and the confiscation of the spirit in question. It appears to me, however, also to be very important that some steps should be taken to stop these frauds, and reach those who commit them in the United Kingdom, because it is very rare to see a prosecution instituted against those who commit them here, and they can send as much falsified brandy as they like to England from France without risk to themselves, as long as they do not turn it into cognac on this side of the water. The business arust be a very profitable one, for real French brandy is worth here from 8s. to 10s, a gallon for very ordinary quantities, and for anything very good a much higher price would have to be paid; whereas I am informed that this German spirit is worth about 2s, per gallon. Large quantities are imported to I rance in the usual course of business for mixing with French brandy, both for home consumption and exportation to foreign countries, so that even here it is difficult to know what one buys, and there is no safety except in dealing with well

satisfied to pay the price of a genuine article. It would be invidious to give names, but there are firms of this class at Cognac, Bordeaux and other places who have been long and honorably known in England, as well as in France. The supply of genuins cognac is very limited, and must di minish every year, so that if we see the trade going much as it did before the failure of the vines, it is evident that frauds must be on the mere is .

THE FIG

The strong points in favor of the fig are many, says the Oroville Register. It is a rapid and vigorous grower, begins to bear is early as the jouch, attains a great size and lives to an advanced age, yielding larger and finer crops of fruit as it increases in size and i.e.

It no ds but one-third of the cultivation d other fruit trees, has no off season, but, in the slang phrase of the time, " it gets here just the same," year after year, with abor crop of tempting fruit.

N I cout at, like other trees, with yieldng its namina single crop, however good, t dways produces two in this climate in a angle season. One from the older wood undshumer shoots of the previous year), and a second from the young wood spring shoots of the same year); but in colder regr ns the latter never comes to perfection. As a shade tree it cannot be excelled, for it is like a huge umbrella over the house during the hot season, yet casts its leaves during the rainy weather, and allows the sunshine to reach the dwelling. In this respect it is preferable to the olive or the orange, as they, being evergreen, cast a shade winter and summer alike,

To a poor man who is coming here to make a home, and with the intention of starting a young orchard, the fig has advantages over any other tree. It requires no pruning, which is a saving of one item of expense compared to the apple or peach, It does not need the rich manures of the orange, for the red loam lands of the foothills will grow this tree a score of years without a particle of manure of any kind,

It does not need the constant cultivation of the vine or any of the ordinary deciduous trees, and this is another item saved. When the fruit is ripe it can remain on the trees for days if necessary, and there is none of that laborious and expensive work compared to drying the peach or the apple; thus a poor man can handle a much larger number of fig trees in an orchard with the same cost for labor than he can any of the other fruits that require to be cut before drying. The failure heretofore to produce a first-class dried fig in this State has been owing to the lack of right varieties, but the success attending the White Adrianc, the Brown Smyrua and other new importations shows that at last figs adapted to this State have been found, and from this time forward the planting of this fruit will reach enormous proportions.

The greatest fault with our growers has been that they raised only a few trees and their crops were not large enough to induce We allinde now to huvers to come here. the common black or California fig, for the finer varieties are just coming into bearing, but even the black fig can be made very profitable if the fruit is put up in an attractive and tasty manner. What is needed is that growers put out five or ten acres of figs so as to have quantity enough to draw buyers to their very doors. The history of

drying fig that would compete with the inquiry on the part of State agents, by imported fruit is somewhat curious, and it local estimates of millers, and records of has been stated time and again that the natives of the most noted fig regions kept us from obtaining the better kinds of fruit.

Since the fig has been studied more attentively during the past few years it is learned that while one variety of the fig dues well in one section, it is utterly worthless when removed to another. Thus our hest imported figs come from the valley of the Meander, where are situated the figorchards of Aidin. Now the fig trees from Aidm planted in other localities in Smyrna never give good results; the trees grow and become very large and strong, but yield fruit inferior in quality to the common local variety. Even nurserymen do not appear to realize that there are 450 varietics of this great fruit cultivated in diff-rent parts of the world, while many wild varieties have never yet been tested, though the fruit of the fig tree may be reckoned among the staple foods of man ages before cereals were cultivated by any settled agricultural popu-

MEASURED RUSHELS.

The report of the wheat harvest is made in measured bushels. The Winchester bushel, the unit of measure of the United States, is 2.150.42 cubic inches. The imperial bushel of Great Britain, the standard for measure of cereals and other products, is 2,215,192 cubic inches. The French cereal measure is the hectoliter (100 liters), or 2.8378 Winchester bushels. The Russian unit of measure is the chetvert, equal to 5.956 Winchester bushels, The German measure is the sheffel Every country has its dry measure for cereals. having a specified depth and thickness of diameter. The harvests of all countries are first reported in dry measure, and not by weight.

After the record of quantity is made, there is a question of quality. There are various elements representing quality, but weight is probably the easiest and most practical test. It is prominently a commercial test, though plumpness, color, and clearness are also elements. Values is governed by these physical peculiarities, which divide the harvest into grades representing quality; and it is also affected by chemical constituents and hydroscopic condition. These elements of quality are only to be determined after harvest, and after distribution f sufficient portion of the harvest to be 'urly representative of the character of _s whole. This is so obvious that it needs only to be stated to be established.

These are the reasons why the first statement of the baryest is in units of measure in bushels in this country. The light hushel is worth really more to thrash than the heavy one, but thrashers can not make nice distinctions, and, therefore, make a uniform charge per bushel. Therefore, the thrasher's bushel is a measured bushel. and estimates are based, as far as possible, on the records of thrashing. This is an additional showing of the necessity that estimates should be in measured bushels, The estimate is perfected and published at the end of the year.

The March report, the cereal report next following, shows the quality and estimates the weight of the grain from records of such portion of the crop as has been distributed, from special investigation through is not the slightest foundation for the beknown and respectable houses, and being the repeated failures to obtain a prefitable regular correspondence, aided by a parallel lief."

official inspection at trade centers.

There is in every year a great difference in the weight of wheat of different varieties, in different sections and soils, and under diverse cultivation. The extreme variation is very great, ranging at least from 50 to 65 pounds, and the average less than 50 pounds, as a rule. For instance, the average of estimates of last year was 58.5 pounds; for 1886, 58.4 pounds; for 1885, 57 pounds; for 1884, 58.3 pounds; for 1853, 56,9 pounds.

It would seem that the average weight of wheat in the United States-not highgrade commercial wheat, but grain of all grades and conditions-is about 58 pounds per measured Winchester bushel (exactly for this five years' average 57.0 pounds). Records of a Minnesota wheat dealer for twelve years, from 1872 to 1883 inclusive, made an average very close to 58 pounds per bushel for wheat of all grades. France, the nation of second rank in wheat production, has an equally wide range of quality, according to commercial estimates, that of L'Echo Agriculture being equivalent to 61,2 per bushel for 1557, and 57.3 for 1888, and 59 pounds as an average of ten years. The primitive culture of Russia, South America, and India undoubtedly produces averages lower rather than higher. though in dry countries good wheat is heavy. It is doubtful if any nation in the world produces a ten years' average of 60 pounds per bushel, including every grade and all wheat grown, Commercial estimates are liable to be confined to commercial grades, thus failing to make a true average, with the effect of exaggerating it.

These estimates are a sufficient explanation of our practice of eatimating quantity first and quality afterwards, from sufficient data, in preference to guess-work at the time of harvest, as some inconsistent and thoughtless brokers and minor commercial editors have insisted on. Some such persons have demanded, while the grain is in the field or in the shock, an authoritative statement of the number of bushels of 60 pounds which will ultimately be weighed out-in part at least-from the farmers' granaries; and some of them have either ignorantly or deliberately misrepresented and distorted our previous records of quantity and quality of wheat. Such perversion however, is a part of the speculators' trade capital, and always to be expected.

THE BLOOD ORANGE.

Under the above heading, the Orange Tribune remarks:

"The blood orange is a mere variety of the sweet orange obtained by cultivation, and appears first to have been raised by the Spanish gardeners in the Phillipine Islands, from the capital of which, (Manilla) it, together with the well-known cigars formed at one time one of the chief articles of export. On its first appearance in Europe it excited a considerable sensation, and, in the last century, very high prices were demanded for the trees which bore the wonderful fruit. None, however, now come to us from Malta, where great pains are bestowed on their cultivation. It was for a long time supposed-and, indeed, the idea is not yet quite extinct-that blood oranges were produced by the grafting of the orange with the pomegranate, but there

ANALYSIS OF WINES

Methods Recently Adopted at Convention of Association of Official Agricultural themists

A commission of experts, appointed in the year 1884 by the chancellor of the Empire, to which was intrusted the establishment of uniform methods for the chemical investigation of wine, adopted the following resolutions, which were made public by the Prussian minister for commerce and trade by a decree of the 12th of August, 1884, which provides that they shall be rigidly adhered to in public institutions for the examination of food-stuffs, and are recommended to the representatives of like private concerns.

RESOLUTIONS OF THE COMMISSION,

Since, in consequence of improper manner of taking, keeping, and sending in of samples of wine for investigation by the antherities, a decomposition or change in the latter often occurs, the commission considers it advisable to give the following instructions:

- 1. Of each sample, at least one hottle (% liter), as well filled as possible, must be taken.
- 2. The bottles and corks used must be perfectly clean; the best are new bottles and corks. Pitchers or opaque bottles in which the presence of impurities can not be seen are not to be used.
- \$ 3. Each bottle shall be provided with a label, gummed (not fied) on, upon which shall be given the index number of the sample corresponding to a description of it.
- 4. The samples are to be sent to the chemical laboratory as soon as possible to avoid any chance of alteration which, under some circumstances, can take place in a very short time. If they are, for some special reason retained in any other place for any length of time, the bottles are to be placed in a cellar and kept lying on their sides.
- 5. If in samples of wine taken from any business concern adulteration is shown, a bottle of the water is to be taken which was presumably used in the adulteration.
- 6. It is advisable, in many cases necessary, that, together with the wine, a copy of these resolutions he sent to the chemist

ANALYTICAL METHODS.

Specific Gravity.—In this determination use is to be made of a picnometer, or a Westphal balance controlled by a pienometer. Temperature, 15° C.

Alcohol.-The alcohol is estimated in 50 to 100 cubic centimeters of the wine by the distillation method. The amount of alcohol is to be given in the following way. In 100 cubic centimeters wine at 15° C. are contained n grams alcohol. For the calculation the tables of Baumhauer and Hebner are used.

(The amounts of all the other constituents are also to be given in this way: in 100 cubic centimeters wine at 15° C. are contained n grams.)

Extract.-For this estimation 50 cubic centimeters of wine, measured out at 15° C., are evaporated on the water bath in a platinnm dish (85 millimeters in diameter, 20 millimeters in height, and 75 cubic centimeters capacity, weight about 20 grams), and the residue heated for two and onehalf hours in a water jacket. Of wines rich in sugar (that is, wines containing over 0.5 grams of sngar in 100 cubic centipending dilution, is taken, so that I or at most 1.5 grams extract are weighed.

tilycerine. - One hundred cubic centimeters of wine (for sweet wines below see) are evaporated in a roomy, not too shallow, porcelain dish to about 10 cubic centimeters, a little sand added, and milk of lime to a strong alkaline reaction, and the whole brought nearly to dryness. The residue is extracted with 50 cubic continueters of 96 per cent, alcohol on the water lath, with The solution is poured frequent stirring. off through a filter, and the residue exhausted by treatment with small quantities of alcohol. For this, 50 to 100 cubic centimeters are generally sufficient, so that the entire filtrate measures 100 to 200 enbic centimeters. The alcoholic solution is evaporated on the water bath to a simpy consistence. (The principal part of the alcohol may be distilled off if desired). The residue is taken up by 10 cubic centimeters of absolute alcohol, mixed in a stoppered flask with 15 cubic centimeters of ther and allowed to stand until clear, when the clear liquid is poured off into a glass-stoppered weighing-glass, filtering the last portion of the solution. The solution is then evaporated in the weighing-glass until the residue no longer flows readily, after which it is dried an hour longer in a water jacket. After cooling it is weighed.

In the case of sweet wines (over 0.5 grams of sugar in 100 cubic centimers) 50 cubic centimeters are taken in a good-sized flask, some sand added, and a sufficient quantity of powdered slack lime, and heated with frequent shaking in the water bath. After cooling, 100 cubic centimeters of 96 per cent, alcohol are added, the precipitate which forms allowed to separate, the solution filtered, and the residue washed with alcohol of the same strength. The alcoholic solution is evaporated and the residue treated as above.

Free acids (total quantity of the acid reacting constituents of the wine) .- These are to be estimated with a sufficiently dilute normal solution of alkali (at least one-third normal alkali) in 10 to 20 cubic centimeters of wine. If one-tenth normal alkali is used at least 10 cubic centimeters of wine should be taken for titrasion; if one-third normal, 20 cubic centimeters of wine, The drop method (Tupfel methode), with delicate re-agent paper, is recommended for the establishment of the nentral point, Any considerable quantities of carbonic acid in the wine are to be previously removed by shaking. These "free acids" are to be reckoned and reported as tartatic acid.

* Polatile acids.—These are to be estimated by distillation in a current of steam, and not indirectly, and reported as acetic acid. The amount of the "fixed acids" is found by subtracting from the amount of "free acids" found, the amount of tartaric acid corresponding to the "volatile acids"

Bitartrate of potash and free tartarie acid ,a. Qualitative detection of free tartaric acid: 20 to 30 cubic centimeters of the wine are treated with precipitated and finely powdered bitartrate of potash, shaken repeatedly, filtered off after an hour, and 2 to 3 drops of a twenty per cent, solution of acetate of potash added to the clear filtrate, and the solution allowed to stand twelve hours. The shaking and standing of the solution must take place at as nearly as possible the same temperature. If any considerable precipitate forms during this time meters) a smaller quantity, with corres- free tartaric acid is present, and the estimay be necessary.

b. Quantitative estimation of the bitartrate of potash and free tarturic acid: In two stoppered flasks two samples of 20 cubic centimeters of wine each are treated with 200 cubic centimeters ether-alcohol (equal volumes), after adding to the one flask 2 to 3 drops of a 20 per cent, solution of acetste of potash. The mixtures are well shaken, and allowed to stand sixteen to eighteen hours at a low temperature, the precipitate filtered off, washed with ether-alcohol, and titrated. (The solution of acetate of potash must be neutral or acid. The addition of too much acetate may cause the retention of some bit atrate in solution.) It is hest on the score of safety to add to the filtrate from the estimation of the total tartaric acid a further portion of 2 drops of acetate of potash, to see if a further precipitation takes place.

In special cases the following procedure of Nessler and Barth may be used as a

Fifty cubic continueters of wine are evaporated to the consistency of a thin symp (best with the addition of quartz sand), the residue brought into a flask by means of small washings of 96 per cent. alcohol, and with continual shaking more alcohol is gradually added, until the entire quantity of alcohol is about one hundred cubic centimeters. The flask and contents are corked and allowed to stand four hours in a cool place, then filtered, and the precipitate washed with 96 per cent, alcohol; the filter paper, together with the partly flocculent, partly crystalline precipitate, is returned to the flask, treated with 30 cubic centermeters warm water, titrated after cooling and the acidity reckoned as bitartrate. The result is sometimes too high if pectinous bodies separate out in small lumps, inclosing a small portion of free scids.

In the alcoholic filtrate the alcohol is evaporated, 0.5 cubic centimeters of a 20 per cent, potassic acetate solution added, which has been acidified by a slight excess of acetic acid and thus the formation of bitartrate from the free tartaric acid in the wine facilitated. The whole is now, like the first residue of evaporation, treated with (sand and) 96 per cent alcohol, and carefully brought into a flask, the volume of alcohol increased to 100 cubic centimeters. well shaken, corked, allowed to stand in a cold place four hours, filtered, the precipitate washed, dissolved in warm water, titrated, and for one equivalent of alkali, two equivalents of tartaric acid are reckoned.

This method for the estimation of the free tartaric acid has the advantage over the former of being free from all errors of estimation by difference. The presence of considerable quantities of sulphates impairs the accuracy of the method.

Malie acid, succinic acid, citric acid.-Methods for the separation and estimation of these acids cannot be recommenced at the present time.

Salicylic acid .- For the detection of this, 100 cubic centimeters of wine are repeatedly shaken out with chloroform, the latter evaporated and the aqueous solution of the residue tested with very dilute solution of ferric chloride. For the approximately quantitative determination it is sufficient to weigh the chloroform residue, after it has been again recrystallized from chloro-

Coloring matter,-Red wines are always

mation of it and of the bitartrate of potash to be tested for coal-tar colors. Conclusions in regard to the presence of other foreign coloring matters drawn from the color of precipitates and other color reactions are only exceptionally to be regarded as safe. lu the search for coal-tar colors the shaking out of 100 cubic centimeters of the wine with ether before and after its neutralization with ammonia is recommended. The etherial solutions are to be tested separately.

Tannin,---In case a quantitative determination of tannia (or tannin and coloring matter) appears necessary, the permaneanate method of Neubaner is to be employed. As a rule the following estimation of the amount of tanniu will suffice: The free acids are neutralized to within 0.5 grams in 100 cubic centimeters with standard alkali, if necessary. Then 1 cubic centimeter of 40 per cent. sodic acetate solution is added, and drop by drop a 10 per cent, solution of ferric chloride is sufficient for the precipitation of 0.05 per cent, of tannin. (New wines are deprived of the carbonic acid held in solution by repeated shaking.)

Sugar,-The sugar should be determined, after the addition of carbonate of soda, by means of Fehling's solution, using dilute solutions, and, in wines rich in sugar, (i. e., wines containing over .5 gram in 100 cubic centimeters), with observance of Soxhlet's modifications, and circulated as grape sugar. Highly colored wines are to be decolorized with animal charcoal if their content of sugar is low, and with acetate of lead and sodium carbonate if it is high.

If the polarization indicates the presence of cane sugar (compare under polarization) the estimation is to be repeated in the manner indicated after the inversion (heating with hydrochloric acid) of the solution. From the difference the cane sngar can be calculated.

Polarization .- 1. With white wines: 60 cubic centimeters of wine are treated with 3 cubic centimeters acetate of lead solution in a graduated cylinder, and the precipitate filtered off. To 30 cubic centimeters of the filtrate is added 1.5 cubic centimeters of a saturated solution of sodic carbonate, filtered again, and the filtrate polarized. This gives a dilution of 10.11 which must be allowed for

2. With red wine s: 60 cubic centimeters wines are treated with 6 cubic centimeters acetate of lead, and to 30 cubic centimeters of the filtrate 3 cubic centimeters of the saturated solution of sodic carbonate added, filtered again, and polarized. In this way a dilution of 5.6 is obtained.

The above conditions are so arranged (with white and red wines) that the last filtrate suffices to fill the 220-millimeter tube of the Wild polaristrobometer of which the capacity is about 28 cubic centi-

In place of the acetate of lead very small quantities of animal charcoal can be used. In this case an addition of sodic carbonate is not necessary, nor is the volume of the wine altered. If a portion of the undiluted wins 220 millimeters long shows a higher right-handed rotation than 0.3°, Wild, the following procedure is necessary:

Two hundred and ten cubic centimeters of the wine are evaporated on the water bath to a thin syrup, after the addition of a few drops of a 20 per cent, solution of acetate of potash. To the residue is added gradually, with continual stirring, 200 enhic centimeters of 90 per cent, alcohol, The alcoholic solution, when perfectly clear, is poured off or filtered into a flask, and the alcohol distilled or evaporated off down to

about 5 cubic centimeters. The residue is treated with about 15 cubic centimeters water and a little bone-black, filtered into a graduated cylinder, and washed with water ontil the filtrate measures 30 cubic centimeters. If this shows on polarization a ro tation of more than 0.5°, Wiid, the wincontains the unfermentable matter of conmercial potato sugar (amylin). If in the estimation of the sugar by Fehling's solution more than 0.3 grams sugar in any 100 cubic centimeters was found, the original rightrotation caused by the amylin may be diminished by the left-rotating sugar; the above precipitation with alcohol is in thi cas to be undertaken, even when the right rotation is less than 0.3°, Wild. The sugar is, however, first fermented by the addition of pure yeast. With very considerable content in Felling's solution; reducing sugar and proportionally small bift-rotation the diminishing of the left-rotation may be brought about by cane sugar or dextrin or amylin. For the detection of the first th wine is inverted by heating with hydrochloric acid (to 50 cubic centameters wine 5 cubic centimeters dilute hydrochloric acid of specific gravity 1.10), and again polar ized. It the left rotation has increased the presence of cane sugar is demonstrated The presence of dextrin is shown as given in the section on "gum." In case care sugar is present, well-washed yeast, as puras possible, should be added, and the winpolarized after fermentatian is complete. The conclusions are then the same as with the wines poor in sugar.

For polarization only large, exact instruments are to be used.

The rotation is to be calculated in degrees, Wild, according to Landolt (Zeitschr. f. analyt. Chemie, 7.9):

- 1° Wild =4,6043° Seleil.
- 1° Soleil =0,217189° Wild.
- 1° Wild = 2.89205° Ventzke.
- 1° Ventzke=0.346015° Wild.

Gum (arabic) .-- For establishing the addition of any considerable quantities of gum 4 cubic centimeters wine are treated with 10 cubic centimeters of 96 per cent, alcohol. If gum is present, the mixture becomes milky, and only clears up again after several hours. The precipitate which occurs adheres partly to the sides of the tube, and forms hard lumps. In genuine wine, flakes appear after a short time, which soon settle, and remain somewhat loose. For a more exact test it is recommended to evaporate the wine to the consistency of a sirup, extract with alcohol, of the strength given above, and dissolve the insoluble residue in water. This solution is treated with some hydrochloric acid (of specific gravity 1.10) heated under pressure two hours, and the reducing power ascertained with Felding's solution, and calculated to dextrose. In genuine wines no considerable reduction is obtained in this way. (Dextrin is to be detected in the same way.)

Mannite.- As the presence of mannite in wines has been observed in a few cases, it should be considered when pointed crystals make their appearance in the extract or the glycerine.

Nitrogen .- In the estimation of nitrogen, the soda-line method is to be used.

Mineral matters .- For their estimation, 50 cubic centimeters of wine are used. If the incineration is incomplete, the charcoal is leached with some water, and burned by itself. The solution is evaporated in the gnited.

Chlorine estimation.—The wine is saturated with sodic carbonate, evaporated, the residue gently ignited and exhausted with water. In this solution the chlorine is to be estimated volumetrically according to Volhard, or gravimetrically. Wines whose ieshes do not burn white by gentle ignition, usually contain considerable quantities of chlorine (salt),

Sulphuric acid - This is to be estimated directly in the wine by the addition of barium chloride. The quantitative estimation of the sulphuric acid is to be carried out only in cases, of where the qualitative test indicates the presence of abnormally large quantities. . In the case of viscous or very moddy wines, a previous clarification with Spanish earth is to be recommended, i

If in a special case it is necessary to investigate whether free sulphuric acid or potassium hisululate are present, it must be proved that more sulphuric acid is present than is necessary to form neutral salts with all the bases.

Phosphoric acid,-In the case of wines whose ash is do not react strongly alkaline the estimation is made by evaporating the wine with sodic carbonate and potassic oitrate, the residue gently ignited and taken up with dilute nitric acid; then the molybdenum method is to be used. If the ash reacts strongly alkaline the nitric acid solution of it can be used directly for the phosphoric-acid determination.

The other mineral constituents of winealso alum-are to be determined in the ash or residue of incineration.

Sulphurous acid .- One hundred cubic centimeters wine are distilled in a current of carbonic acid gas after the addition of phosphoric acid. For receiving the distillate 5 cubic centimeters of normal iodine solution are used. After the first third has distilled off, the distillate, which must still contain an excess of free iodine, is acidified with dydrochloric acid, heated and treated with barium chloride.

Adulteration of grape wine with fruit wine .- The detection of this adulteration can only exceptionally be carried out with certainty by means of the methods that have so far been offered. Especially are all methods untrustworthy which rely upon a single reaction to distinguish grape from fruit wine; neither is it always possible to decide with certainty from the absence of tartaric acid, or from the presence of only very small quantities, that a wine is not made from grapes.

In the maunfacture of artificial wine together with water the following articles are sometimes known to be used: Alcohol (direct or in the shape of fortified wine), cane sugar, starch sugar, and substances rich in sugar (honey), glycerine, bitartrate of potash, tartaric acid, other vegetable acids, and substances rich in such acids, salicylic acid, mineral matters, gum arabic, tannic acid, and substances rich in the same (e. g., kino, caterha), foreign coloring matters, various others and aromas.

The estimation, or rather the means of detecting the most of these substances, has already been given above, with the exception of the aromas and others, for which no method can as yet be recommended.

The following substances may be mentioned here in particular, which serve for increasing the sugar, extract and free acid same dish, and the entire ash gently Dried fruit, tamarinds, St. John's bread, dates, figs.

h .- BULES FOR JUDOING THE PUBLITY OF WINE.

I. (4.) Tests and determinations which are, as a rule, to be performed in judging of the purity of wines: Extract, alcohol, sugar, free acids as a whole, free tartaric acid qualitative, sulphuric acid, total ash, polarization, gum, foreign coloring matters in red wine. (b.) Tests and determinations which are also to be carried out under special circumstances: Specific gravity, volatile acids, bitartrate of potash, and free tarturic acid quantitative, succinic acid, make acid, citric acid, salicylic acid, sulphurous acid, tannin, mannite, special ash constituents, nitrogen,

The commission consider it desirable, in giving the estimations generally performed, to adhere to the order of succession given above—(under (a).

II The commission cannot regard it as their province to give a guide for judging of the purity of wine, but think it advisable, in the light of its experience, to call attention to the following points:

Wines which are made wholly from pure grape juice very seldom contain a less quantity of extract than 1.5 grams in 100 cubic centimeters wine. It wines poorer in extract occur they should be condemned, unless it can be proven that natural wines of the same district and vintage occur with a similar low content of extract.

After subtracting the "fixed acids," the remaining extract (extractrest) in pure wines, according to previous experience, amounts to at least 1.1 grams in 100 cubic centimeters, and after substracting the "free acids," at least 1 gram, Wines which show less extractrest are to be condemned in case it can not be shown that natural wines of the same district and vintage contain as small an extractrest.

A wine which contains appreciably more ash than 10 per cent, of its extract content must contain, correspondingly, more extract than would otherwise be accepted as a minimum limit. In astural wines the relation of ash to extract approaches very closely 1 to 10 parts by weight. Still, a considerable deviation from this relation does not entirely justify the conclusion that the wine is adulterated. 1

The amount of free tartaric acid in pure wines, according to previous experience, does not exceed one-sixth of the entire "fixed acids."

The relation between alcohol and glycerine can vary in pure wines between 100 parts by weight of alcohol to 7 parts by weight of glycerine, and 100 parts by weight of alcohol to 14 parts by weight of glycerine. In case of wines showing a different glycerine relation an addition of alcohol or glycerine can be inferred,

As sometimes during its handling in cellars small quantities of alcohol (at most 1 per cent. by volume) may find their way into wine, this fact must be borne in mind in judging of its purity.

These proportions are not always applicable to sweet wines.

For the individual ash constituents no generally applicable limits can be given. The opinion that the better kinds of wine always contain more phosphoric acid than others is unfounded.

Wines that contain less than 0.14 gram of mineral matter in 100 cubic centimeters are to be condemned if it can not be shown that natural wines of the same kind and the same vintage, which have been subject to like treatment, have an equally small content of mineral matter.

Wines which contain more than 0.05 gram of salt in 100 cubic centimeters are to be condemned.

Wines that contain more than 0,092 gram sulphuric acid corresponding to 0.20 grams potassic sulphate (K2 SO1) in 100 cubic continues rs, are to be designated as wines containing too much sulphuric acid, either from the use of gypsum or in some other way.

Through various causes wines may become vicious, black, brown, cloudy, or bitter; they may otherwise change essentially in color, taste, and odor. The color of red wines may also separate in a solid form; still all these phenomena in and of themselves would not justify the condemnation of the wine as not genuine.

If during the summer time an energetic fermentation commences in a wine, this doca not justify the conclusion that an addition of sugar or substances rich in sugar, e. g. honey, etc., has taken place, for the first fermentation may have been hindered in various ways or the wine may have had an addition of a wine rich in sugar.

The methods adopted by the "Union of Bavarian Chemists" differ considerably from the above in many particulars, so they are given also, together with the methods adopted by the same body for the examination of beer in somewhat condensed form.

A STATE FARM IN FRANCE,

M Gustave Henzé contributes to the Journal d'Agriculture Pratique an interesting account of the national sheep-breeding farm (bergerie) at Rambonillet, which has now been in existence for more than a century, King Louis XVI having purchased tha palace and forest of Rambouillet in 1781 and having created an experimental farm on the estate at a cost of about £1,600 in the money of that day, now representing, of course, a much larger sum. The manager of the farm, one Tessier, obtained the King's permission to spend more than double the sum in the purchase of Fribourg cattle, Angora goats, implements, and the cultivation of different varieties of wheat, clover, etc. But the great service which Tessier did was the introduction of the Merians sheen which have since made Rambonillet so well known. These sheep had originally been brought from Spain some few years before, on account of the excellence of their wool, and Tessier, having seen them at various places in France, induced the King to order the French Ambassador at Madrid to purchase a flock of 364 sheep, which were selected from among the choicest flocks in Spain, at a cost of £650. The sheep, on their arrival at Rambouillet, were placed under the charge of a man named Delorme. who was still shepherd when Napoleon came to Ramboillet in 1504 and complimented him by calling him the "first shepherd in France." The flock was reinforced two or three times by fresh importations from Spain, and it was the custom to hold an annual ram sale from 1794 to 1853, but in the latter year this was given up, and since then the sales have been private. The change was a beneficial on, for while the highest prices at public auction were £17 for rams and £5 for ewes, the average price for the twenty years from 1853 to 1872 was £34 for the rams and £16 for the ewes. The total value of the sheep sold out of the Rambouillet flock from 1797 to 1872 was £139,000, represented by 4,309 rams.



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FRIDAY.....DECEMBER 7, 1888

THE FOLLOWING SUMMARY of the latest information received from the wine-growing districts of Europe is obtained from Bonfort's Circular: The French vintage has terminated. In some localities in the Médoc and a good many vineyards of the Palus the amount secured is something extraordinary; but the fact should not be lost sight of that about one-half of the Gironde vineyards have fallen a prey to the phylloxera. In 1887 the Gironde produced about 100,000 tons of wine. This year the product will probably exceed 250,000 tons, whereas prior to the phylloxera invasion-for example, in 1875the yield was nearly 600,000 tons. It is as yet difficult to judge the quality, but it will in any event prove quite merchantable; this is chiefly owing to the treatment with sulphate of copper, which completely shielded the vines against the mildew. With reference to our 's grand white wine' vintage it may be stated that after the rainy days in the summer, followed by an exceptionally high temperature, the securing of this important crop has taken place under much more favorable eircomstances than we were permitted to hope toward the close of August. The grapes were well developed, having, besides a thin skin, few stones and a perfect degree of ripeness, thereby yielding more wine than the most sanguine among our proprietors had anticipated. Having been exempt from mildew, the foliage of vines had been completely preserved; in this manner the wood attained full maturity, but the grapes with it. If, therefore, proprietors, in the future, perseveringly resort to the treatment alluded to, there is every reason to hope that we shall gradually return to the good and ample yields of a dozen years ago.

CLAUS SPRECKELS is running his new beet-sugar factory at Watsonville day and night. It is said that he gives personal supervision to all details, and instructs the hands in the new process, with which they are unfamiliar. The beets have proved very satisfactory as regards saecharine qualities, and many farmers are receiving \$8 per ton, whereas only \$4 was guaranteed. Spreekels will probably establish several other refineries in different parts of the State.

IT SEEMS strange that distillers of brandy in California do not recognize the advantages of shipping consignments of the liquor to New York in bond. Storage and insurance are much cheaper than here, besides the advantages to be gained by a depot at the great distributing point for home and export trade. The only risk run is in a connection with some irresponsible firm, which may be more inclined to look after its own interests than those of its clients. This, however, can be avoided by a little circumspection at the beginning in the selection of agents, Among the most respectable firms in the Commission line, is that of J. D. W. Sherman with offices at 39 and 43 Water Street. New York City. He has already been largely interested in California vines, fruits, oils and brandies, having established quite an export trade, the goods, being scattered into almost every city of the United Kingdom. The firm makes liberal advances as well as the freight on all goods consigned to him from the Pacific Coast, and the rate of interest charged 6 per cent, is much lower than the best rates which can be obtained

Some of our mannfacturers of olive oil will do well to open up a correspondence with this firm, it being in a position to drive business in this particular line of goods.

THE FOLLOWING is a synopsis of Sunday decisions recently rendered by the Treasury Department at Washington, D. C.

A Chinese liquor, known as "Sam-Shu Wine, " is dutiable as a medicinal preparation, containing alcohol, at the rate of 50 cents per pound, under T. I., 118. Certain other so-called Chinese wines, which consist of spirits manufactured from grain or other material imported in bottles, are dutiable at the rate of \$2 per gallon for the contents and 3 cents per bottle for the bottles, under T. I., 310 and 311. (Letter to Collector of Customs at New York, October 30, 1888.)

Orange bitters, a beverage containing spirits, are held to be dutiable at the rate of \$2.00 per gallon, under the special provision in Schedule II., T. I., 313, for "cordials * * " and other similar spirituous beverages or bitters, containing spirits. " (Letter to Collector of Customs at New York, November 13, 1888.)

The fact that imported merchandise sustained damage during the voyage of importation, by reason of the hold of the importing vessel being saturated with oil leaking out on a previous voyage, the hold, however, having, in the meantime, been thoroughly cleaned and whitewashed before the shipment of the merchandise which sustained damage, does not prevent the allowance of damage under the provisions of section 2927 of the Revised Statutes. (Letter to Collector of Customs at New York, November 14, 1888.)

Cut-glass bottles containing samples of chemicals and other goods, are held to be dutiable at the rate of 45 percent, ad valorem, under the provisions in Schedule B., T. I., 135 and 136 for articles of glass cut, &c. These bottles being specially provided for, are excluded from classification under section 7 of the act of March 3, 1883. (Letter to Surveyor of Customs at Louisville, Ky., November 14, 1888.)

Subscribe for the MERCHANT,

The PATH of the total eclipse of the sun which occurs January 1st will begin near the ecuter of the group of the Aleutian Islands, which stretch across from Alaska to Kamschutks, and sweeping southward and eastward over the North Pacific Ocean, will reach the continent a little north of San Francisco. It will continue on in a broad curve turning northward and crossing Nevada, Idaho and Montana, will end for up in Canada, about half way between the western end of Lake Superior and Hudson Bay. Unfortunately this line of totality runs between 100 and 200 miles north of Mt. Hamilton, which will render it impossible for the astronomers to see this interesting eclipse with the most powerful telescope in the world. While only observers along this line will see the sun totally celipsed, a partial eclipse will be seen all over the United States.

THROUGH THE courtesy of the Italian Consul in this city we are enabled to produce for the benefit of our many readers, an account of the viticultural products of the twelve agricultural regions into which Italy is divided, which will undoubtedly prove as interesting as instructive. The original publication was made at the instance of the Societa General dei Viticoltori Italiani, which in order to provide the wine growers and wine merchants in Italy as well as in other countries with reliable information of their home industry, has offered valuable prizes for the best reports on the subject.

The MERCHANT will, from time to time produce the publication in extenso, translated by Guido Rossati, Deputy of the Italian Government for Italian wines in England.

ONE TRAVELS far now-a-days for home news. The Anglo-American Times published in London gets in the following thrust at our local scientific guides in matters of agriculture: "California is still having trouble with her Agricultural College, which seems, as represented, to be a mismanaged institution. The Professor in charge has half a dozen instructors under him but they find little or nothing to do, as there are just as many students as there are professors. The bulletins issued from the College are said to be misleading, and less theory with more practical work is called for. The College authorities are constantly asking for money, but the San Franeiseo News-Letter says that the institution is not worth to the agriculturists of the State the money now spent on it."

THE CASE of Mrs. A. M. Rogers against the American Fire Insurance Company of Philadelphia, growing out of the burning of the Margherita winery at Fresno some months ago, has been concluded. The jury after a deliberation of sixteen minutes returned a verdiet which not only awards Mrs. Rogers a large amount for insurance, but also furnishes a complete vindication of the lady, her husband and their agent on the preperty, Mr. I. Ch. De St. Hubert, from the ugly charge of burning the place to obtain the insurance. The verdict has given general satisfaction to the citizens of Fresno.

THE PRESIDENTIAL electors chosen by popular vote will meet at their respective State Capitals on Monday, January 14, office, \$5,571,790; land office, \$1,594,370; 1889, and cast their ballots for President | geological survey, \$634,240; patent office, and Vice-President of the United States, \$796,370.

The total number of immigrants who arrived in the United States during the nine months which suded on September 30th last, was 432,802, against 411,282 doring the corresponding period of 1887 Of the whole number of arrivals this year 61,532 were from England and Wales 62,423 from Ireland, 19,320 from Scot land, 85,098 from Germany, 57,801 from Sweden and Norway, 41,293 from Italy, 32,097 from Russia, and 34,702 from the Austrian Empire. The total number of immigrants who arrived in September last was 39,865, against 48,443 in September, 1887.

THE STATE Viticultural Commission is in receipt of a letter from Dallas, Texas, stating that a man representing himself to be an agent of the Vineyard and Labor Association of California, is in that section offering to procure transportation for workingmen to California for the sum of \$6.45. The writer aska if he is an accredited representative of any legitimate California organization. No such organization as the Vineyard and Labor Association exists in this State, and its reputed representative has been denounced.

Some fellow of a mathematical turn of mind has been to the trouble to calculate that the light of the full moon is equal to that of 134,000,000,000,000,000 candles, and that within one or two of that number of candles could be set up on end on one-half the surface of the moon. This information, observes the Chicago Herald, will enable any one to figure up how much every full moon is worth to us, putting candles at fifteen cents a dozen.

THE CALIFORNIA raisin erop of 1888 is estimated at a million boxes, or 20,000, 000 pounds. Eastern reports show that the California product is driving the Spanish brands out of the market. Withal it appears that in benefitting the world at large, home interests have been temporarily forgotten, and the California Christmas pudding seems fated to be composed of low-grade grapes or the hated foreign rival. This is certainly a rough deal on the western believer in the time-honored interest that "Charity begins at home."

J. D. W. SHERMAN, commission mer. chant 39 and 43 Water street, New York, proprietor of special bonded warehouse for brandy made from grapes, 2 Dist., N. Y. -No. 1, is prepared to make liberal advances on all consignments of California wines, brandies, dried and green fruits, nuts, olives, oils, etc. Correspondence with fruit growers and olive oil manufacturers solicited.

THE CARS of the Southern Pacific Com. pany, especially fitted up and equipped for a three month's tour throughout the East, for the purpose of exhibiting California products, are all in readiness to start. Much benefit, will, it is confidently expected, be derived from this novel and practice method of advertising.

THE ESTIMATED expenditures of the United States Interior Department for the current year are \$94,220,389, the principal items being pension office salaries, \$2,432,950; pensions, \$81,753,700; Indian

WHOLESALE MARKEE.

Quotations given are for targe lots to the

CALIFORNIA RABBINS. Halves, Quarters and Eighths, 25, 50 and 75.

higher respectively than whole box priors. London Lavers, choice per box \$2 000 \tau \text{2 000 \text{2 2}} \text{fam y} \text{ 2 2 000 \text{2 2}} 1 10 7 1 Unstemmed in sacks, per lb. ... Sectless " Saltanas, unbleached, in boxes, &B.
bleached, "

CANNED GLADES Grapes, Muscat, 23₂ lbs = 1 40 × 1 50 3 lb 1ms = 2 25 × 2 45

Sun Dried Grapes, Stemless, st.s. San " Unsternmed, sks.

California Sugar Refinery pure list lated December 6tb; Circle A. Pat Cub., 8 Circle A Crushed, 81 je, Pine Crushed, 8 81, c; Confectioners' Circle A, 8 Extra C. 70; Golden C, 6 .c; Star Drips Syrmp. in bbls , 171%c; hf do, 20c; 5-gall kegs. 25c; 1-gall tius, 35c per gallon,

Price list of the American Sugar Refinery dated December 6th: Extra Fin Cub., in bhls, 7° se; Circle A. Crushell, 7°, . Line Crushed, 71 gc; Powd-red, 74g., lixtra Fin. Powdered, 7%, c; Dry Granulat al, XX 7%, , Dry Granulated, 71, e., Confectioners' Carcle A, 7c; Extra C, Ger Golbin C, 5 o. American Golden Syrup, in bbls, 200 per

LATEST REPORTS from the San Prancisco grape market show poor offerings and light sales. Poor grapes sell down to 10 and 25 cents per box, with better quality selling at from 35 to 90 cents per box.

San Francisco, December 1, 1888.

The Bradstreet Mcreantile Agency re-November with assets \$122,072 and liabilities \$286,138 as compared with sixty-mine

State	No.	Assets	Liabilita	_
California Oregon Washington Nevada Arizona	11 Ter 6	\$53,972 00 26,400 00 3,500 00 7,750 00 50 00	\$150,291 71,647 14,500 15,000 1,700	() () (,)
	61	\$122,012 00	8220,138	OI

organizations and their prominent memerate considered valuable, coming their opposition.

VINDAD RAISING

The time $|\psi\rangle = \frac{1}{|\psi\rangle d\nu} = d + i\psi$ and $|\psi\rangle = \frac{1}{2} \Delta I$ are real to be counting up to $|\psi\rangle$ much for sedistratory basis in this State ! that it I. Id a few y ars ago. It was for a time a question why the thousands of trees which were finally cut out or worked over into star frosts, chiefly primes, were unproducts. This, the general verdet who like to the the matter of saturation or it was a prime factor in success with discuss. Liter it has come to be conad a living lagely a question of proper vacation. Which is both these considers to repeatant, and which is more important ciment, perhaps, by definitely settled yet, but the dishes been barned to warrant almost liplanting in many parts of the State, provinces a trustworthy bearing variety a Transactly will have a range nearby (t). It test it is earlings in the State, notably the scot Mr. Hutch $(-\Delta)$ in wiver ity Extra Powdered, Stee: Dry Granulated, is called the Commercial Alm aid. It ories not an India observational has bor propaguid for a north reflyear, in a small page to the way, a chit a nt parts of the State. The tro preserves marked and very distinctive characteristics. It is of poculiarly study or with the wood being much larger than that of other varieties of almond. Tenerans some of the Law soluting winter, and there for has been called almost an every en-The abroad is assuming so much impostance at the present time, especially those varieties of California origin which are found to supersode the Europe in corts, that a pramising almond like the commercial is

LGEA BUT ISDUCE

11 11 W is r sponsible for the statement that the much-disposed skunk i a good entensologist, and the farmer and gardener make a great mistake in persecuting and distroying this hundle little ports sixty-one failures in the Pacific Coast animal. The f weeges he purlotts from States and Territories for the month of the farm ash navard very peculy component sate for the great number of noxious insectassets \$354,300 and liabilities \$719, 150 not in the sus spoken of in the immortal his meet to the ground, his sense of or smell is so acute not an insect, not a larve, above ground or below, can escape hum, his (yes i, we low with unusual brilliancy,

PLOWING THE ORGHAND

1 11. 0 - 9 1.71g z . 1 : er I ber Tighter be This does not app oration, bell o aml bitti tir Versitable physic the tests active dials.

In the first provided as a month only being made of each review to sale virthe deal turiow is the source, the row, I white it will not us a drain for any simplins rain that may fall on the on-hard during the winter. The places to be additions to done so as to provide that the dramage should be as perfect as per suble, to $\operatorname{pr}(\operatorname{vert})$ wishing in a vote son. I dose a with wint reconstruct the second reason to be seen a fit, and It too, outhly were bare a pleasure, it will stay in ast the whole send record to a should be a by with it would apply powing about March. It shows to rethin case, but oft anto the trestern were who a thorough irreption, hourd by given before he destroy. In May ne is sometimes seen, the second plowner, In ploying the second 16.542,000,000 battles, or about four dozin for the previous month with assests about sandown, on some clevated spot, time it should be revered that e, the sar \$167,162 and liabilities \$322,588, and fifty witching for the May both as he who is rows should be threen to the control fig. for the corresponding month of 1887 with his drawing 0 hit, and he saves him, too, row. Co sephowing is not sanaba for 1 A good wash to provent the hair from archard with as it have the a analyty faming out is real with one ounce of power The failnes for the past month are divided, cleay, but between his teeth. He will sit an wanter turns one amount and to an a be-The faitness for the past month are divided among the States and Territories as follows. In the distriction of the States and Territories as follows. The tild is a persistent hunter, and phowings."

The faitness for the past month are divided as a faitness of the faitne

THE TERST DISTRIBUTES

In riples to the contract of the us he scance only that and branch for the later than the research that the KATE FIELD writes that she experi nees hidden project Vent tobacce piontations present distributions was considerable opposition from temperance his services in destroying the tobacce worms, first discovered to the later than the experimental project to the constant of the constant of the later than the have been into decree 1 . ; It the tien does not hart the plant. bers, In her efforts to preach the "Gospel of Severally ars ago tobacco was cultivated Moors about 1150 to a conditional it was the Grape," but feels confident o overs to some extent in the adjoining town of introduced into fretend it since near Brighton. The writer, wishing to get a few the above date. It was first used in Tee- 19, 2014 of assent as arrived at this port of the worms to rear moths from, call done land at about the close of the concury, by sea and 80,150 by rail, a total of 118,-PROHIBITIONISTS ARE, it is said, annoyed a centleman owning a plantation in the When first made whichy was not as a 577. Departures during that period were at the fact that claret and absunthe are town, and made known his object. The inchemic. Dure constitute that period were at the fact that claret and absunthe are town, and made known his object. The inchemic. Dure constitute that period were at the fact that claret and absunthe are town, and made known his object. the popular colors for women's attire this reply was called all you can find; we band or equivalent to the distribution assumed period in 1887 and 17, fall. An exchange noted for its timp rewent to the indicate of them. In going Red 16 keet 0.5 view and the distribution 1886, ance prochytics observes that they feel through the reas I noticed many holes in the first with national with hours. I have this the more keenly as watered sitk is the ground average or six mehas deep, but which have a very fine and the second network of the second network has a summary of the second network bear mental in not as much used as formerly.

Could not make out the object, as they did based was a consequent non-transfer mental have between hear and proceedings of the second network has a consequent non-transfer mental have between hear and proceedings of the second network has a consequent non-transfer mental network have been mixed as formerly. The European best crop is estimate I to become I monitored the fact to the generative I for the horizontal properties of the state of t at 2,850,000 tons, compared with 2,07,000 til man, who smiled as he told me that it given tother produced last year, equal was done by analysis to obtain the tolaced. His him is to be by even as helf of V Point assa wite example of to an increase of 413,000 tons, or a crop worms that had left the plant and burned not, until late time is passed for at Branchast menth. The purveousti considerably in excess of that of 1880 87, thems loss to undergo their transformage in the same of the various cane crop some of the same
BLANKET YOUR HORSES

of the Menonana who he worldied with the most and it is an instance in the following coppies with the request that it be pulse

"A the search of the representativery reddenier man the ears a horse will who has with a comfortable and I shifter state were and for coverand hat had over follows. Nor is it a who sod harta m, but is and the document y with the owner normal Andreas in which will be pure good to the spring in soft in the spring in then for hard work, on the food that is ther led none but its natu-Tiple to the The cost of the blanket At the rest than say I in the feed, ho-

When perchasing blank is, it is an obt to to the tother your memby, and the hope to be to they thee that cost act of the first. A good branket, which adipose durable and last, is the cheapest

THE WINE PRODUCE OF EUROPE.

All to who structed sixs the Dic Wr to ..., has be a made of the average you yij. Tues of wine in the various wines 1 Lan causti's of Europe, These ares uper sont hociolis is of twenty-two

		[5 000L000]
		27,538,000
		 25,030,000
	digita	, 14,000,000
		1 00:0,000
		2 500,000
		2.130,000
		2 (00),000
- 1 1 1		1,200,000
- F (7040,000
Europ in	Parker	 609,000
Bornon a		20000,3335

Thus the total wine produced in Europe fairly may be estimated at 125,084,335 herfeliters, qual to about 2,752 minjoint galbas, which, at six bottles to the gallon, is bettles of wine to each inhabitant of Lurope,

dered camplion and one quart of boiling wawith a fluincher sponge once a week.

A rigino deadly to caterpillars and other immuted pasts of trees and shubbary ones it in being bases and stems of t heat splants until the june has been exwas placed d. This has considerable odor, which r mains for s not time, and the applica-

To a territor months ended November

BYNATIVE WINE SHIPMENTS SEA. OUR

PER P. M. S. S. CO'S STEAMER SAN JOSE, NOV. 23, 1888.

TO NEW YORK.

MARKS.	SHIPPERS.	PACKAGES AND CONTENTS.	GALLONS	VALUE
P	Francilla Berges & Co	2 barrels Wine	91	87
C& V B		2 cases Wine		11
E.K.& Co	4.1	6 cases Wine		3
S & Go	Carps & Co	15 barrels Wine	750	30
М	Dr sel & Co	5 barrels Wine	251	14
& Co	**	3 barrels Wine	151	11
К		2 barrels Wine	101	5
	**	1 barrel Wine	52	4
1P	**	1 % barrels Wine	28	2
	11	S barrels Wine	404	28
i B	A G Chanche	G barrels Witte	303	12
i & F		50 barrels Witte	2,515	1,25
in C	5 Lachman & Co	33 barrels Wine		80
3 D & Co		65 barrels Wine	1,137	1,65
't'o		10 barrels Wine	503	(0)
В		20 barrers Wine	984	28.
11		14, barrels Wine	27	1
F		1 farrel Wine		1
**		3 b barrels Wine	81	7
0 & 00	Williams, Dimonda Co.	10 casks Wine	1,091	60

TO CENTRAL AMERICA

of the state of th	D. Mr. L.	5 W.m.	25	(845)
M R, Corinto	r atecks	5 cases Wine		138
. 1	**	2 casks Wine	1 5.51	
H G in oblong, Amapala	**	4 kegs Wine		24
J C de C. Amapala	S V Mooney	16 cases Wine		66
J M, Champerico	EL 6 Storle & Co			28
C V. Corinto	Napa Valley Wine Co .			118
II in diamond, La Union	cal Transfer Co	3 harrels Witte		75
A P R. Corinto	J Gundlach & Co	G barrels Wine		196
R S G. Champerico	D Feigenbaum	10 cases Wine		55
J M S. Guatemala	Euz de Sabla & Co	50 cases Witte		175
E A, Acajutla	H P Taylor, Jr	S barrels Wine	153	115
P A A, Puntas Arenas	Eisen Vineyard Co	5 kegs Wine	100	65
L & Co, Champerico	Hellman Bros & Co	20 rackages Wine	200	120
P B. Guatemala	Cabrera, Roma & Co	1 cask Witte	60	45
L M, Acamtla	John T Wright	2 cases Witte		10
**	••	10 cases Witte		40
S S, Acajutla	**	3 harrels Wine	99	75
J T & Co, Funtas Arenas	J Trejes & Co	4 octaves Wine	108	113
JAP, La Libertal		12 cases Wine		45
Total amount of Wine,	110 cases and		1,542	\$1,148

MISCELLANEOUS SHIPMENTS.

DESTINATION	V ESSEI	RIG	GALLONS.	VALUE.
Central America	Frithrof	Schooner	1,304 34	\$1,115 17
Zhina	City of Sydney	Steamer	265	48 136 29
Honolulu	Lady Lampson Unatilla Hospodat	. Steamer	151	11,
			7 839	\$3,63
Total shipments by P Total Miscellaneous	anama steamers		7 gallons 9	\$5,041 3,633
Grand totals.		21,5	365	311,674

REEDING GRAPES WINTER.

The cultivation of out-door grapes for domestic use, says the American Agriculturist, has become so general that the subject of keeping them for winter use, and the best method, may profitably claim attention. The past season I selected from over one hundred varieties in my grounds forty of those in general cultivation, and a few very recent introductions, to test their keeping qualities. It is the generally received opinion that the thin-skinned native seedlings are the only keepers. This is correct so far as regards preserving flavor, but several hybrids of foreign blood are the best keepers known.

The varieties intended to be laid up for winter use should be those only which adhere well to the stem and are not inclined to shrivel soon after removal from the vine. They should be allowed to remain on the vine as long as they are safe from the frost; a clear, dry day is necessary for picking; careful handling and shallow baskets are important. The room in which they are to be kept for awhile should be well ventilated and the fruit laid out in single layers on tables or in shallow baskets where the air freely circulates, closing the windows at night and in damp weather.

In about ten days the stems will be dried are laid away. When danger from this is place in the meautime.

DURING THE over, and the stems resemble those of raisins, the time for packing has arrived. I have used baskets for permanent packing, but much prefer shallow trays or boxes of uniform size to be placed one above the other so that each one covers the box below, the uppermost only needing a cover.

Until very cold weather the boxes can be piled so as to allow the remaining moisture to escape through a crevice about the width of a knife blade. Before packing, each bunch should be examined, and all injured. cracked, or rotten berries removed with suitable : cissors; if two layers are packed in a box, a sheet of paper should intervene; the boxes must be kept in a dry, cool room, or passage, at an even temperature. If the thermometer goes much below freezing point a blanket or newspaper can be thrown over them to be removed in mild

Looking them over once in the winter and removing defective berries will suffice, the poorest keepers being placed accessible Under this treatment the best keepers will be in good order as late as February, after which they will deteriorate.

THE FRENCH brandy trade is in a state of transition, and will not revive until some distilling shall indicate the alcoholic yield sufficiently to prevent monlding after they of the 1888 wines. Few shipments take

Description of the Blueberry.

The Blueberry is a valuable fruit, and is a reliable fruit to grow in our northern States where the more tender varieties of fruits winter-kill. It is perfectly hardy, having stood 10 degrees below zero without showing any injury to the most tender buds. It ripens in this latitude about the 1st of July, and is borne in clusters like currants; shape, round; reddish purple at first, but becomes a bluish black when fully ripened. The flavor is equal to the raspberry, a very mild, rich sub-acid, pronounced by most prophe delicious. It may be served with sugar and cream or cooked sance, and is splendid for winter use. The plant seems to flourish in all soils, and is a prolific bearer. It grows very stocky and makes a nice hedge. The shinning dark green leaves and the blue fruit making a pleusing contrast. The demand for the fruit is great, and usually brings 15 cents per quart. They commence bearing the first year after setting out, and yields a full crop the second and third year after setting out. They are propagated from suckers and root cuttings. The plant is about the height and size of the currant bush, and very stocky, holding the fruit well up from the ground. Plants should be set in the fall and spring, in rows two or three feet apart, and five or six feet between the rows, making a perfect hadge, and no grass or weeds should be allowed to grow between rows.

1 Dozen Plants by mail, 60 cents. 2 Dozen Plants by mail, \$1.00

100 Plants by Express, 1,000 Plants by ex. or freight \$15.00

How to send money:—I would prefer to have money sent by American Express order, all sums of \$5 00 and under, cost only 5 cents, and if order is lost, money will be promptly refunded to sender. If not convenient to obtain express order, money can be sent by registered letter or post office money order or postal note, drawn on Portland, Mich. Postage stamps will not be accepted only from our customers that cannot obtain an express order—only those of one cent denomination wanted.

lants are car fully packed in damp moss and delivered to express or freight office, for which I make no extra charge.

DELOS STAPLES, Portland, Ionia Co., Mich.

FANCHER CREEK NURSERY, FRESNO, CAL.,

OFFERS AN IMMENSE STOCK OF

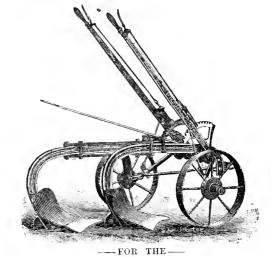
Fruit Trees, Grapevines and Ornamental Trees, SPECIALTIES:

White Adriatic Fig. Ten Tested Varieties of Table Figs, Olives Pomegranates, and also a Fine Collection of Palms, Roses and Oleanders.

A five-pound box of White Adriatic Figs sent by express to any address on receipt of \$1.50. Send for Fall Catalogue and address all letters to

F. ROEDING, PROPRIETOR, FRESNO, CAL.

PEERLESS GANG PLOWS.



SEASON OF 1888.

Have Heavier Beams and Made Stronger Throughout, Than Heretofore.

The Only Steel Beam Gang Walking Plows which will not Clog in Heavy Stubble or Weedy Land.

TESTIMONIALS

Light draft, strong and durable.—M. Murray, Livermore Has given entire satisfaction.—E. H. Farmer, Gilroy, Superior to them sil.—A. J. Huff, San Lucas. Easily managed, strong and durable.—H. Carpenter, Snisnn.

For further information, prices, etc., write to

BAKER & HAMILTON, SACRAMENTO SAN FRANCISCO

OLIVE RANCH OF 448 ACRES, FARM FOR SALE.

ar in 1887. Fully equipped with both rangs, agricultural tools, herses, etc. Saty telill sell at a bargain.

For particulars apply to

INCORPORATED ISSL

W. A. HAYNE, Jr., ANTA BARBARA

r 240 acres in one place and 208 in th. Think a lived acres in Senoma County, her. Sold together or apart, having that that's drive from radroad station, 1 at acres planted in the finest variety of ,000 olives planted, and counterns to the total terms and the state of the state , all capable of the highest cultivais viral never failing springs and ns of hay and plenty of grain, fine stream, Aberty for ik and restwood timber on the water. Title perfect. Situated in Santa 12 perty. Good house, large barn, and at but high. Se nery, climate and reads arbara county, near Los Olives depot un xe e d. Good fishing and Lunting in to morable shood all the year round. One title in sticlegant and profitable suburban here son Northern California.

of "W H ," office of the San Train of TW H

160 ACRES

TREES AND PLANTS. CALIFORNIA NURSERY CO.,

NILES, ALAMEDA COUNTY, CAL.

CARGEST STOCK ON THE PACIFIC COAST

Fruit Trees, Olives, Oranges and Lemons, Nut Trees, Wine and Table Grapes, Berry Plants, Shade Trees, Evergreens, Shrubs, Roses, Etc., Etc., Etc.

FOR COMPLETE LIST, SUND FOR OUR NEW CATALOGUE,

 - CALIFORNIA NURSERY CO. JHN ROCK, Manager.

Niles, Alameda County, Cal.

WAKELEE'S

the Best headest!

Don't Buy InferiorArticle

Sime fue Else.

IN 1-LB AND 5-LB CANS

By Ordering Your Groceries

CLUFF BROS

Largest and Cheapest Cash Grocers on the Pacific Coast.

ALL GOODS PACKED AND SHIPPED FREE.

end your address and have their Mutthey Pro- List mailed regularly to you AT SLAD A TRIAL ORDER, TA

CLUFF BROS.

9 & H Montgomery Av. 40 A 12 Fourth Street. 100 & 111 Montgomery Av inl Hayes Street,

SAN FRANCISCO, CAL.

L. G. SRESOVICH & CO.,

505 and 507 Sansome St., San Francisco, Cal.

SHIPPERS AND COMMISSION MERCHANTS

IN CREEN AND DRIED FRUITS, NUTS, Etc.

DESICEATED COCOANUT, Manufacturing every day. Ask your Grocer for Pioneer brand. It is the best and cheapest in the world. Medals awarded in all Lairs where exhibited.

California's Million Dollar Company:



OF SAN FRANCISCO, CAL.

		CAPITAL.	ASSETS.
JANUARY I. 1875		. \$ (1,100)	\$ 747,455 45
JANUARY L. 1880		T-r(1, ()()()	1,160,017 00
JANUARY 1, 1888		1,+ (((),0(())	2,151,925 18

Losses Paid in Twenty-live Years, \$7,500,000 00.

WM, J. DUTTON, Secretary, D. J. STAPLES, President. B FAYMONVILLE Asst Secretary. ALPHEUS BULL, Vice-Presiden.

JOHNSON-LOCKE MERCANTILE COMPANY,

COMMISSION MERCHANTS, SAN FRANCISCO.

Sole Agents Pacific Coast.

Mere Proceeding to Royal Baking Powder.

SAN FRANCISCO,

Kingsford's Oswego Starch, Topher and Squirrel Exterminator Walter Baker & Co's Chocolates and Cocoa John Dwight & Co's Soda.

We will offer a full line of other Grocers' articles shortly,

300,000 FRUIT TREES.

We offer for the season of Issa st a large and very complete assortment of FRUIT TREES grown absolutely willhout irrigation.

Also Organ intal and Shad. Trees Not Trook Oracket will her en Trees, Small Frints, Graje Vine Evergreens, Hodge Platts, Strats, H. ses, Butts, Ses to at-

LARGE STOCK OF OLIVE TREES, ALL SIZES. JAPANESE TREES AND SHRUBS IN GREAT VARIETY. torrespondence Respectfully Solicited

TRUMBULL & BEEBE,

419-421 Sausome Street,

CALIFORNIA

SUBSCRIBE FOR THE SAN FRANCISCO MERCHANT

CALIFORNIA RAISINS.

 $\Gamma(|w||p)/\langle p|$ in the East, says the Nfor ..., compolered the rapid developm at of the raisin industry of the Pacific coast, of the acrenge devoted to it, or the amount of capital invested, says the New York Till are. A large preportion of consumers is sub-under the impression that Spain furnishes the entire product. John M. Chapman, whose than has been appointed as agents of the California Dried Fruit Association, has given the Trib in reporter some inter-sting facts at ut the mann, in nt of this łuxuri us vine product,

Unlike the cultivation of graps on the Atlantic sca-boards or in the large vincyards of Ohio, the vin s are grown without a trellis, bong trained so that the laterals curve over the stilk, thus protecting the fruit from the direct rays of the sun. The last finit grows close to the ground, shaded by the broad haves, Fruit growing of a the laterals is likely to become sunlain I, and can only be used for making second quality maisins. The first crop matures about Aug. 15 to 20; the so-called social crop from S pt. 15 to Oct. 1. Vines b gin to produce at the age of 3 years, and at 6 years are infull bearing. An impression prevails that raisins ar mode from purple grapes; on the contrary, the raisin grape is a trans-lucent green. The principal variety used in California is the white muscat of

a rather simple paperss. The branches are laid on trays exposed to the same form at ition begins also st man, dustry; after two weeks they in turn down, when the under side is cared in about one week longer, the grap assuming the data purple tint common to renew. Some of the bunches att r baying the trays are moist, others are too dry. To equidize the measture and mak the goods of uniform consistency, the grapes are put into sweat question. The only way we in California boxes holding about fitty pounds; there they remain until a proper condition of moisture is attained. Then they are re- labor-saving driers so as to lessen the cost moved to packing houses, and the clusters are separated from the loose grap's and placed in boxes in layers, making what is known as the London layers of choice table fruit. Bunches that are too small for this purpose or are of a harsh texture are put into a staming machine, from which they are automatically conveyed to a series of trays or sifters, making "crawn" or loose raisins of several grades for cooking. Four weeks on the coast, from the maturity of the fruit, render them ready for market.

Grape raising is profitable. A vineyard of good averag will yield six tons of grapes this, and to enable the wagons to pass to the acre with a value of \$20 a ton on the vines, or \$120 an acre. Older vineyards produce from eight tons, and fruit have been set out 10x10 feet, 10x12 feet, brings a better price than the product of younger vines, as it is better adapted to the very largest space given to any vines to the larger or bunch styles of high price our knowledge- But again practical raisins. Thus a 40-acre vineyard, in full experience shows us that while such wide bearing, at six years of age would furnish space allows the wagons to pass, they also a revenue to the grower of over \$6,000, make the vines grow more than is good for Labor, however, is high and growers have them. The vines are apt to become too found it difficult to obtain a full comple-ment of hands to cure a crop needing such little fruit; and it has been found that an prompt att ution. This difficulty will be lacre of vines, where the latter stood 8 by 8, lessened as newcomers thicken. Califor- yield much more than where the vines nia produces in quantities only the raisins stood 12 by 12, the greater number of that compete with the renowned Malaga vines counting for much more than the varieties. The Pacific raisin crop of 1888 greater size of the vines. There is only

Sum of this has gone abroad, swing to be plant the vines, closer one way than the We have also received a letter from the the latter fact will help to distribute the domestic crop through this country.

PLANTING OF VINES.

It is not necessary, says the, Fres. p Exposition, to be an experienced vineyardist to see that the vines in our raisin vineyards and the fruit trees in our eichards are set at improper distances. The object of the fruit-grower is not merely to get as large yields as possible but also to handle his crop as anly as possible, and to work his land to the best advantage. In regard to raisin vineyards nearly every planter has followed the old habit to set 8 by 8 feet. This distance is usual for the majority of wine vineyards, too, and in the south, as well as in Napa and Sonoma, it is yet the choic of the vineyard men. In the European wine districts this distance of S by 8 feet would be considered entirely too great. We may search France and Spain from one end to the other and find no vineyard where the vines stand further than 7 feet, and a great many where the distance is 212 fort or 3 feet apart each way and no regularity at that. The early California planters decided upon 8 by 8 feet and this has been followed by the majority of vineyardists until quite recently. It was supposed that our soil in California was so rich that the vines would grow to meet more than anywhere else and The preparation of raisins for market is bear so much larger crops. Accordingly they would need a larger surface to spread over and had to be farther apart. This theory was undoubtedly correct, especially us regards raisin grapes. As to wine grapes it has been fully demonstrated that poorer swil and a less space given to each vine produces a much better quality of grape and wine than when the grapes have all they want of the rich soil and abundant space. But there are other sides to the can compete with European or foreign labor generally, is to use mechanical and of raising the grapes and handling the crop. This can only be done by having abundant space. Even with the vines eight by eight feet it was found necessary to have larger roads at short intervals to enable the wagons to pass, while unloading the empty boxes and hauling the filled ones away. But the pickers had still to do much labor in carrying the boxes to and from the roads, and in vineyards where these roads were rather far between, a close calculation actually shows that it costs as much to carry the boxes to the wagon road as it costs to pick the grapes. To obviate everywhere between any two rows of vines in every direction, later raisin vineyards in 12x12 fect, etc., the latter, however, being

th small crops of Malaga this year, and other, and the question only is, which extremes are the most desirable? If planted 8 by 8 the vines yield as much as they can yield while healthy and without over-bearing. The distance or surface is then 64 square feet to each vine, and to maintain that space should be the object of the

STRANGE TASTES.

The old saying, that what is one man's meat is another man's poison, is realized in the opposite tastes of the people, observes a writer in Health Monthly. The Turks shudder at the thought of eating oysters. The Digger Indians of the Pacific Coast rejoiced in the great locust swarms of 1875 as a dispensation of the Great Spirit, and laid in a store of dried locust powder sufficont to last them for several years. The French will eat frogs, snails and the discased livers of geese, but draw the line at alligators. Buckland declares the taste of boa constrictors to be good and much like yeal. Quass, the fermented cabbagewater of the Russians, is their popular tupple. It is described as resembling a mixture of stale fish and soapsuds in taste, yet, next to beer, it has more votaries than any other fermented beverage. A tallowcandle washed down with quass forms a meal that it would be hard to be thanful

In Canton and other Chinese cities rats are sold at the rate of fifty cents a dozen. and the hindquarters of the dog are hung up in the butcher shop alongside of mutten and lamb, but command a higher price. The edible birds' nest of the Chinese are worth twice their weight in silver-the finest variety selling for as much as thirty dollars a pound. The negroes of West Indies eat baked snakes and palm worms fried in fat, but they cannot be induced to eat stewed rabbits. In Mexico pariois are eaten, but they are rather tough. The Gauchos of the Argentine Republic are in the habit of hunting skunks for the sake of their flesh. The octopus, or devil fish, when boiled and then roasted, is caten in Corsica and esteemed a delicacy. In the Pacific Islands and West Indies lizard eggs are eaten with gusto.

The natives of the Antilles eat alligator eggs, and the eggs of the turtle are popular everywhere, though up to the commencement of the last century turtle was only eaten by the poor of Jamaica. Ants are eaten by various nations. In Brazil they are served with a resinous sauce, and in Africa they are stewed in greese or butter. The East Indians catch them in pits and carefully wash them in handfuls like raisins. In Siam a curry of ant eggs is a costly luxnry. The Cingalese eat the bees after robbing them of their honey. Caterpillars and spiders are dainties to the African bushman. After they have would the silk from the cocoon, the Chinese eat the chrysalis of the silkworm. Spiders roasted are a sort of dessert with the New Cale-

THE MYSTERIOUS VINE DISEASE.

The following letter from B, T, Galloway, of the United States Department of Agriculture, Section of Vegetable Pathology at Washington, D. C., recently published in the Santa Ana Blade will be of interest to many of our readers,

Your favor of October 30th, addressed to Professor Scribner relative to the destrucis expected to approximate 1,000,000 boxes, one way out of this difficulty, and that is live Vine disease has been referred to me, money

State Viticultural Commissioner relative t this matter, in which it is stated that th agent sent to investigate the malady ha discovered nothing whatever that would in dicate the cause of the trouble. The speci mens communicated were received, but ur fortunately they were destroyed by a jan tor who was ignorant of their value.

But one examination was made of th specimens before they were destroyed, an this is not sufficient to warrant us in mal ing a report. This disease is certainly on that should be thoroughly investigated and we shall be glad to do all within ou power to aid you and the people at large i discovering the cause and remedy for the disease, if such a thing is possible.

I shall be greatly obliged if you will sen another supply of the diseased wood an some leaves from diseased vines, if it is possible to obtain them at this season From what I know of the disease I doubt it it is caused by a fungus, at least by any o the higher ones, such as the perouospor or uncinnla. If there is sufficient interes shown it is possible that we can arrange t send an expert to your State in the sprin to investigate the disease. In the mea time I should be pleased to obtain all th facts possible having a bearing upon th malady.

It would be well to know when an where the disease started whether it ha spread from a given point, what varietie are affected, etc.

Hoping to hear from you often, I re main, respectfully.

FRUIT RAISING.

We noticed the other day, says the Chic Enterprise, that Hon. Wm. Parker, o Vacaville, was in our city. Mr. Parke was originally from Shasta county, hu afterwards was a prominent citizen of Re-Bluff. Some years ago he bought a trac of land belonging to an estate at Vacaville and has resided there, and made himsel very useful in building up that section and in doing so has accumulated consider able wealth. Five years ago he represented Solano in the State Senate, and is now one of the principal men in the Vacaville bank. In purchasing his tract of land he did not propose to hold on to it but sole ont all but two hundred acres, which he put in fruit, and now is realizing a hand some revenue from his investment. He explained the mode of gathering fruit in Vacaville, which is a big improvement or the method in vogue here. He says that they have help come from all the snrround ing counties, families bringing their tents with them and camping and living right in the orchard, just as if they had gone to the country for outing. There are no payments made by the hour, but every one is paid according to his labor performed by the weight, basket or tray. By this means all foolishness and play is avoided, as every one is prompted to excel his neigh bor. He says that the white help is far more profitable than Chinamen. He says payment by the day or hour will never make fruit-raising profitable, as the natural instinct of the worker is to take things easy, especially where a lot of young people are brought together. He also says that the women and girls over in his section don't think work in the orchards degrading, but some of the best of then spend their time in the orchards, camping out, enjoying the novelty and making

CALIFORNIA FARMS

his reason alone the thousands of acres of and in this county adapt d to the cultivaion of the raisin grape ar still plowed and sown to wheat and burlly Yet there s not a farm r who could not have easily out out a few der sef vin seach year. nd thus in a few years have be a ablelet the nur rtain what and bariev erop. in income can be obtained from the and to the grower. hile the trees are growing by cultivating to potatoes, corn or other vegetald's, et there are hondreds of acres of hand this section particularly elapted to is in lustry that to-day grow nothing at wild grass, on which her beef common at, and which return little for no profit a the value of the land,

evions, and still the demand was not ... We ought not to be reduced to expedice some sout in I may do not in a usfied.

The status of the sugar left become first to destroy to good the state of The people of Tulare county, says the for Chico and vicinity is a sixt of the same and vicinity is a sixt of the same and vicinity is a sixt of the same and vicinity of the same and the s Fires, are loath to engage in any farming Spreakels, and also say the new sec. As we also we need to horizontal enterprise that wal not Spreakels, and also say the new sec. As we also we need to horizontal enterprise that wal not spreakels, and also say the new sec. As we also we need to horizontal enterprise part fact ry at Witsony. Mr. Spreakels, as South Americans by the artistic factors are needed. still disposed to beath a similar factory than the destroy that it is at Chrone but is so engaged in the second addition to assume the second at the order of the second at the second a dde to begin this yer. The encyse of the books which have benesed by a Alcohol Faisle in Natural have not been riported, but it sound is stood to be largely favorable. Mr. Speckels represent whereas it has Markers and the fill to send a literal. The sum of hers Agrandment Institute in a one from his grape patch. In the frest discuss tend M. Spr. Legges et its viewer soften as the sum of the ones tend. M. Spr. Legges et its viewer viewfilm. ere that there is a certain income of requests the farmers to prentocicle on little soft. It is a new types of the Sign to Sign in rushing reaches were. This they can will add of refer to account it all and with respect to the sign of runes and other stone fronts, and a cir. is the crip will be a viry probable in lover match, and a cir.

CALIFORNIA WINES,

"Y's, our deposit with training is the ginning to resum or nertically property tions" said a well-known wine in reliant uttle and horses are grazed, year in tiel systerday in an interview with a reportof the X(w,Y,rk,r,r) . "It is not yet in the later of the $\sin_2 r$ of the t wenty-five y are all, y " list sensor yields. His mental of p is 1." Thousands of young men in our Call. California pr 1 to 1 20 most set goods of east of substantially in Saluminian set of rnia towns, and enters are sighing for wine, and it is soft to policy that in the colour, so we not consider the portunities to engage in fruit growing, years she will be suching our language out, and the like to repeat dear it. buth is understoodly the most profitable.

That is aplen in middly opin in from many in the discrete form what has range taken place in a whole for the place in the place ple of co-op ration. What one main may be defined from France, but the index of the by the albit in the index of the able to do ten may accomplish with affect d them that the wine was took and not only in the first of the able to do ten may accomplish with affect d them that the wine was took and not only in the first of the able to do ten may accomplish with affect d them that the wine was took and not only in the first of the able to do the able to do ten may accomplish with affect d them that the wine was took and not only in the first of the able to do ten may accomplish with affect d them that the wine was took and not only the albit in the index of the able to do ten may accomplish with affect d them that the wine was took and not only in the albit in the index of the albit index at are put under careful management wines than French, New, how wir, by instance small crystals of red for, wi at are put under careful management wines an in French. Seek in week, by instance sman crystos or reaching to prove highly predicted. The careful grating and seeming for early of prengitated ther from, a substant which is soil, lighter wines, and see a superfict of adenouraged by A. T. Hadeh and others the successful fruit-growers. Frank Conglon, who lives about two dial for Conforma was as. His lies when distributed waver, engineery proiles from Smartville, brought to Marys. California coart compar were less and read in the same apparatus, in the recently quite a quantity of oranges. Well, my bear beyond it some orangers, for those of a line and carrefull, or soft own on his place. They are without the reason because in stotus never sew justific wed by the formation of a line emish and free from soil and are a sany French claret. There is magazy and the able to determine was after 110 usual size, while the color is higher French coret brought to this country. But the experiment of dishlarg a spacetry of er \$75 worth of fruit for pin in they. French with wine from Spain Page and man a principly consolidation programmes is year he will have the profits from Algeria, contribution of laters and find outpress y the that was a secenty-five trees and intends to plant more and heavy that the Transhara will not a more allowed the transfer of The reports concerning the grape yield much surpass the mixture, wheathry that ever a come a from three to a very of is season vary as much in properties. It is owing to the disher fit none in a sold, that it after maxed with a post of the its eseveral localities from whomse they for quick profits in the bisiness. Interest water law established properties. occid differ from one another in soil on money is high in California, and of in serial chain treated by the metal I d climatic variations. But one coulds, the vitic nturest cannot safer lite hour his main lid climatic variations. But one condition with each and every wine until it is not condition for mark ting.

The formation of rod form by the district—a searcity of labor.

When he can see the unforment in tapms he had not also had a local triangle of the unforment in tapms he had not also h by been touched upon around the edges, of adowing it to ferment and become which is the stress of an area of the stress of the mark to some distinct the mark t If were, and the extent of the mark to some diduces it with comments where a price its with fisher to the is in our productions with it have been rails poison first, to step the firm it. In passive during the fact, not and then to give it the proper flavor and the very state, county and city in this indicates it with banky, and just in the set of the firm it is a set of the first tenth of t

blke these, though, for the Conformalis with Hall for has his view to The work of tree planting and pruning harvest wines can underseal their for all in the waters of the rise. s fairly begun in Santa Clara county, tempetitors in the low recrebes of aims. Petit on line leading deed much of the princing is already. In the higher they width, we too discoverable to raz waters be and planting will from this time, things before they be, he line restricted. Very take in them as found to sof the French spatiates for one of larger [ask and care and the care stage

Ν., so the the form so state was leader of the toin the ls, is in thet university distrithe aghost $N(\sigma)_{\sigma}$, though, if the $x \in W(\sigma)$, then $x \in W(\sigma)$ < . i . . stablished they form by the resison the period of venice to a . Har Walley ... MARKING A BEGINNING

anis to be seen on the repenned oring a the California who may be far superfirst a plant to the superfirst above the California who may be far superfirst a plant to the control of the California who may be far superfirst a plant to the control of the California who may be far superfirst a plant to the control of the California who may be far superfirst a plant to the control of the california who may be far superfirst a plant to the control of the california who may be far superfirst a plant to the control of the california who may be far superfirst a plant to the call the california who may be far superfirst a plant to the call the c

ast is destined to become the fruit garne of this country. The shipments of permitted the firm internationally as the country of the sound a good one. All winders as the country. The shipments of permitted the firm internationally as the country. The shipments of permitted the firm internationally as the country. The shipments of permitted the firm internationally as the country. The shipments of a good one. All winders as the shipments of the country of the firm international transfer as the country. The shipments of the country of the c

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Charles I. on the scaffold.

Richard III, was killed in battle.

Henry VIII, of carbuneles, fat and fury. George III, as he had lived a majorin George IV, of gluttony and drunk nness

Henry VII. wasted away, as a miser ought.

James I, of drinking and the off-cts of vice.

Charles II. suddenly, it is said, of apoplexy,

Edward V was strangled in the Tower by his nucle, Richard III.

William Rufus died the death of the poor stags which he hunted,

Henry II. of a broken heart, occasioned by the bad conduct of his children.

George I, from drunkenness which his physicians called an apoplectic fit.

T. William III, of consumptive habits of body and from the stumbling of his horse Edward HI, of dotage, and Richard II. of starvation-the reverse of George IV.

Henry VI, in prison, by means known then only to his jailer, and now only known in Heaven.

William the Conquerer from en rmous fat, from drink, and from the violence of

George II, died of a rupture of the heart, which the periodicals of that day termed a visitation of God.

Richard Cour de Lion, like the animal from which his heart was named, died by an arrow from an archer,

Edward II, was barbarously and inde, cently murdered by ruffians, employed by his own wife and her paramour.

Henry V. is said to have do d of a " pain" ful affliction prematurely." This is a courtly term for getting rid of a King.

Edward I, is also said to have di d of a "natural sickness" - a sickness which would puzzle all the college physicians to denominate.

Henry IV, is said to have died of "fits cansed by uneasiness," and uneasiness in palaces in those times was a common com-

THE OLIVE IN SONOMA VALLEY,

G. F. Hopper of Sobre Vista farm located a few miles west of Sonoma, in giv ing his experience with the Mission and Picholine varieties of olives says. "In Isso I bought from Mr. West of Stockton fifty Picholine olive trees, these were planted on the hillside in good rich loamy a few olives on them, and the berries are small. In land adjoining this I planted in 1875 or 1876 about one hundred Mission bearing or will be so next year, olive cuttings. The growth of these has being heavier each year. They are free which made its appearance some two years of a wash of concentrated by whale-oil soap and sulphur, applied at 130 F. in July. The following thetolog we gave the the same temperature. The trees are go with the place if sold sirid, planted twenty-four feet apart. The Mission trees planted in 1875 are from ten to twenty inches in diameter, and the Picholine planted in 1550, the largest, are about four nchea in diameter."

A Boston gr - ry firm were in the habit. of putting the residuary cash at hight in a hag and depositing it in the oatmeal barre. The other day a small bey called early for some eatmeal, and one of the firm served him, giving him, along with the need about \$140. Since that tines the Best is newspapers have been printing any ries monts off-ring a liberal reward to the bay if h would call at the store. At last accounts the boy hadn't call d.

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To responsible parties will give contract been very fine and the trees have been for five or ten years. Collars are equipped bearing for the last eight years, the erep with the lest steam machinery and distilfrom all post except a little of the black scale plory; 250,000 of coop ray, oak and role wood. The place must be seen to be approago; was soon overcome by an application | ciated. I am ready to give immediate p session, and will make a positive sacrific if applied for at times 15 (non-god-us) of trees 4 washing with sales of a kind water at choice wines of vintage of 1886 87 88 may

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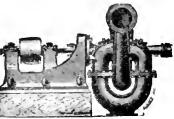
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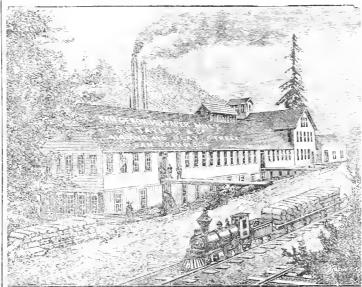
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VOL. XXI, NO. 7.

SAN FRANCISCO, DECEMBER 21, 1888.

PRICE 45 CENTS

ITALIAN VITIGULTURE.

ALTIVATION AND PRODUCTION OF THE VINE WITH CHARACTER INTICS OF WINES.

In Interesting Account of the Wine Industry turnished by the General Italian Wine Grewers Association §

> Contract from page 8. VENETIA.

In the Venetian provinces the vine culage of pessessing a territo situate at three made. lifterent altitudes. I The plains from prierally associated with trees and product policella wine is product by ng black grapes. 2. The Engine and The approximate composition of the Seriei hills, yielding black grapes as on the cipal Venetian wines is as fellows. dains, but sometimes trained on trellis work instead of trees. 3. The hills and iplands of the L. wer A ps, and the slopes d the large vall 58 methor dpine district. there the finest back grapes are produced. In the sid of the Lake of Garda, as far as Bassano on the River Brenta, white grapes re most generally grown.

If the large number of sucs cultivite i u the Venetian territory would but give a galar supply, there would be a surge surilus production applicable to expertation. 3nt the cultivation of grass has in some ocalities been extended at the explass of he vine, and as the very mild crimate dur. ng the months of vog toron is very favorthe to the order n and mail is, there has ieen a continual importation of contains able and blinding wills, in it specially rom the Southern Admatic provides so

But, should the temperary causes which t present k p back the production disco-sear, the Veretran planes would be add, laring son by ars, to export a portion of [herr Pool Wines, who here sof a lague for, pood bedy, and have the plyinting of seang low in pric.

On the hills, the crips will ribes than hose on the plants, and as the excusive ystem of cultivation is being extended, the production is a manually mercasing. Note: withstanding the the profits are besitten a withstanding the the profits are researched. These reduces the expenses settled purpose reduces the expenses settled purpose reduced the find are smoothed from the find are particular. requent

In the district of Vorma are problem in these excillent table wines kin will is Unperfect to Viljendent. According which are n d of a very mit use e for, I it sufficiently alcoholic, of an agree all flavor, and whom old, persons a very delicate bedight. This district has a surplus production applicably to exportation.

R d tild wines are also reasolirably produced in the previous of Vienza but the great report of its production is represented by dry and agree olds white wines. these qualities are in storate asively in . duced on the hills at the bead of the valley of the Pares. From the white grapes of ure is very extensive, and has the advance this district good sparkling wines are also

At Veronic, one may easily obtain all he sea to the hids are cultivated with vines. | mission to the estates where the best V.1

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of wines of well-known styles and brands are deposited or sold at the port and on the docks of Genoa; and it may be said that this is the most important wine market in Italy. For establishments where wines are kept and blended, to prepare them for exportation chiefly by sea, for direct consamption, those of Genoa rival any at Cette or Bordeaux.

The few wines which are obtained from the mountainous coasts of Ligaria, which are principally White, may be esteemed first-class. They frequently possess 14 per cent, of alcohol, but as a rule the proportion is between 10 and 12 per cent.; their acidity is rather low, being from 514 to 6 per mille. The amount of dry residue is high, generally varying between 22 and 28 per mille, the sweet wines containing as much as 70 and 80 per mille of dry residue including sugar, but these are only produced on a small scale. The average production for each province is:-Hectolitres

Porto Maurizio			46,200
Genora			292,600
Massa Carrara			75,600
Total pro-	luction fo	r Liguria	414,100
This produc	tion, cor	npared w	ith the pop-
ulation of each	district	, gives tl	e following
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averages:-Average Districts. production per

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S. Remo	. 35
Average for the Province of Porto Maurizio	35
	Litre
Albenga	45
Chiavari	52
Genoa	
Savona	
Spezia	
Average for the Province of Genoa	-33
Castelnuovo di Garfagnana	
Massa Carrara	-39
Pontremoli	31
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The chief growers are:-

Marquis Giacomo Durazzo Pallavicini, Pegli, represented in Genoa by Negrotto &

Average for the Province of Massa Carrara 45

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To be continued.

ABOUT OLIVES.

There bas been a great deal of talk lately about olives. The Pomona Times contributes this advice to the general fund of information: "Don't get the idea in your head than an olive tree will thrive and do well anywhere and under any kind of treatment. This is a mistaken notion which has some way gained credit in California. The olive will grow, to be sure, in the rocks and so will an orange tree, but neither will do so well unless they have a good, rich soil to support them. The moist lands are not suited to the olive, but to insure success it must have deep, rich, dry soil and it needs cultivation and care the same as oranges or lemons. California olives are much smaller than the imported ones; and probably the reason is that in the State they are neglected and left to their own chances.

CALIFORNIA WINES

Why They Are Equal to Quality In the Best European Vintages,

The following interesting article by I. H. Connelly, appears in the latest issue of the .Inalyst:-

"Who drinks California wine?" That was a common sneer a few years ago upon lips of prejudiced foreigners and pretended bon vivants. Importers of, and dealers in, the alleged wines of Europe were deeply interested in decrying an American product that, if popularized, would inevitably sadly minimize their business very speedily. Se they talked learnedly of the "tartar" in California wines; professed to find in them a most offensive "earth flavor," and denounced their "fruitiness" as something unbearable to an educated palate. Aping their pretensions to knowledge, the dealers were echoed by sham connoisseurs, who were generally incapable of distinguishing Pontet Canet from a vin ordinaire if they did not catch sight of the labels. Among these it was quite common to hear the affirmation that "one glass of American winwould make me real sick, doneherknow,' and the younger, more inexperienced, and absolutely brainless they were, the more unqualifiedly did they denonne all American wines as "beastly stuff, by Jove."

But now that question may be truthfully answered-"nearly everybody who drinks wine at all drinks California wine, either from intelligent choice or under the hallucination that he is imbibing a foreign article." The intelligent viticulturists and wine-producers of Europe-two very distinet classes of beings, it may be remarked -had long appreciated California wines at their trne value, realized the almost boundless capacity for their production, and, when the phylloxera and anthraxnose invaded and destoyed the European vineyards, were prepared to turn at once to this country for relief.

Does any drinker of European winesor, to speak more properly, of beverages supposed to be such-ever think of how strange it is that while thousands upon thousands of hectares of vineyards in France, Germany, Italy, Spain, Portugal and Madiera were completely destroyed by the pests mentioned, the production of wine from those countries, instead of falling off, actually increased? Territories where the vines were fewer by from 40 to 60 per cent, shipped more wine than ever; choice vintages, of which the producing vines were absolutely extinct, were as abundant as ever, and at little, if any, advance in prices; and, though the vineyard proprietors were rained, the exporters of wines to the United States and their agents here, made as much money as they ever did, if not more. The explanation of it all is in the one word-California.

It is related of an aged wine manufacturer, who was dying, that, in giving his farewell injunctions to his eldest son and heir, he said: "Always remember, my son, that you can make wine ont of anything -except grapes," That was well-understood wisdom among the wretches who shipped to us many hundreds of thousands of gallons of bogus European wines-long hefore the phylloxera made its appearance -from Cette and Hamburg. Those bogus wines were simply potato-spirit, water, acid coloring matter and flavoring extracts. ty of "fruitiness" could possible be cou-ceived. But their foreign labels made them for "protection" in the shape of a heavy Mumm's. Couldn't you fix up some some Nothing more free from objectionable quali-

delicious to our contemmers of American tariff upon wines imported in bulk, which wines, though of course it was admitted that they did not possess such fine "bequet" as certain other avowedly vinous products from Europe that were higher priced and differently labeled,

The alarmingty enormous decrease in real wine production inspired among Eure. peau wine manufacturers the happy idea of carrying their deceptions to a higher grade of wines than the cheap ones that they had previously been making as already described. It was, they unders'ood, necessary to have genuine wine to deceive certain classes of drinkers-those who were willing to pay good prices for bottles bearing labels with which they were acquainted. So California wines were carried by ship-loads to France, Germany and Itlay, there to be doctored slightly with flavoring and color ing matter, bottled and re-shipped to this country as the products of European vine yards, in which guise they were naturally quite free from "tartar," "cartle theor" and "fruitiness," and were en lowed widall the precious gifts of "flavor" and "box quet" that might be expected from their

The work is going on to-day more than ever before. Three bottles out of four a our most aristocratically titled imported wines, if they had voices, might hon stly cherus upon landing here: "Home again home again! from a foreign shore! those who drink those wines have little really to complain of, beyond the fact tha they are paying fautastically high prices for what they might have cheaply and of better quality were they not swayed by affected prejudice against the use of native products. Gradually they are learning this fact, and consequently joining the already great army of American wine-drinkers.

must be frankly admitted that a good deal of the wine produced in California twenty years ago was rather poor stuff. There were few among the earlier wine growers there-except the "fathers" at the Spanish missions, who made the superb wines-who had any practical knowledge of the delicate processes for making and keeping wine. They vaguely supposed that there wasn't much about it different from cider-making. As for the nice knowledge of the exactly right moment for racking off wine from the barrel in which it had made its deposit to a fresh one, or the imperative necessity for keeping wine at a regulated temperature and in full barrels, and many other things belonging to the mere radiments of the art they knew absolutely nothing. Then they were generally affected by an insatiate greed for enormous profits.

Nobody in any business in California in those days would have been satisfied with such profits as accrued from like industries in the Eastern States. The men who owned vineyards thought they ought to psy about as well as gold mines. They heard of wines being sold at several dollars per bottle, and being dazzlingly ignorant of the existence of any great difference between wines, could not see why theirs were not worth as much as any others. It was with amazement and indignation that they learn, ed that the bogus wines of Cette and Hamburg were selling in New York for less than the actual cost of production of their winesand were actually preferred. In the first flush of disgnst produced by that discovery, some of them rooted up their vines and abandoned the business forever.

would so increase the cost of the importer bogns wines as to enable the Californi vintuers to undersell them in the Easter market. They got what they wanted, bu with strange fatnousness at once telegraph ed to their New York agents that they re quired their wines to "appreciate in valu to the extent of the tariff just imposed, It was a pretty illustration of the beneficie effect of "protection." Of course, the im porters had it all their own way, but th Californians were stubborn, and held out good while. One man who had 16,00 gallons of fairly good wine stored down town had an offer for it that would hav given him a good profile. No; he wantemore, and would not sell for less, and h held en until his uncared-for wine turner to vinegar, and was practically a total loss And there were many like him in lesser de

A time were on, however, great chang rept into the California wine manufactur. Men from the wine producing districts o Europe, skillint, careful, pati nt, and cor ant to conduct the business on a legiti nate commercial basis, went to Californi and either took charge of already exists vineyards or started others of their own bringing to the service the ripe experienc if g norations of wine producers abroad They made wines of such excellence as as ounded the connoissours of the East an of Europe. Poor Gustave Make, presideo of the French bank in San Francisco, wh shot himself during an aberration of intel lect caused by illness, was one of the first to produce an exquisitely fine wine in Cal ifornia. He made at his vineyard what h called his "Golden Wine," which wa like an ideally perfect Santerne, even fine than Chateau Yquem, and had he lived h would have exercised a highly beneficia influence upon California wine production

The man who deserved most individua credit for dveloping the now vast wine interest of California, was Arpad Haraszthy He, at an infinite outlay of patience, labor time and money conducted experiment upon the varieties of grapes best adapte to wine production on California soil unde the varying conditions afforded in tha country; taught vine growers how to harvetheir crops, make the wines and keep them trained men in the arts of manipulating and blending those wines to produce essentially different qualities of excellent wines and as a member of the firm of Landsberger & Co., from which connection he long sine retired to build up a business of his own was the first to manufacturer an exceedingly good genuine California champagne. Tha champague, by the way, was the material for many a practical joke in the earlier years of its production. Californians had a mania for champagne. They possessed an idea that it was good for the stomach and no mixed drink sold over a respectable bar was deemed complete without a dash of champagne in it. As they paid for the best, they were determined to have what was highest priced and so supposably the best imported champagne.

Importers of that costly beverage artfully kept up the fiction that no champagne was genuine but that which came from France. Constantly, however gentlemen were making acquaintance with Haraszthy's champagne, through the intervention of friends and pretty much every one, finding how good it was would say hat they couldn't tell by the labels what tured and vended in the East. Alluding to interior of that frequent d mand was the preparation of a small stock of bottles, nerely for such practical jokes, with equine foreign labels stripped from imorted bottles and corks brand d to match, out containing the California champague. The instances in which the deception was letected, though it was practiced in humfreds of cases at least, could be counted on one's fing is and tos and mary jully supers at "The Poodle Dog" were paid for as he penalties of the over-confident would-be connoissours who assumed to "know it ill," It is but just to say that no such deeption was ever practiced in commercial ousmess and r Haraszthy's management, Ie was too proud of the fine wine he proluced to permit it to go und rafile label, xcept for an occasional practical joke. and it was wine worthy of his pride. But ie has produced to ther since. Year after ear the vineyards supplying the several hoice varieties of wine blended in his Eclipse" brand of champagne have been nore and more perfectly managed in conormity with his requirements, and the esults attained have been proportionately mproved. Large capital and a perfectly appointed establishment under his peronal, liberal, enterprising and skillful conrol, have also greatly mercased his advanages. These and other causes, it dless of sarticularization, have conspired to enable is attainment of that which has been his goal from the commencement of his work of a California champagne that ranks, in he estimation of all genuine connoissenrs, is equal to the best of Europe. And his sudeavors have been well rewarded. Calioruin champague is now popular not only n this country among intelligent wineirinkers, but in Europe, where Haraszthy's "Eclipse" holds its own, even in France, against the French champagnes, appearing verywhere on the wine cards of the best slubs, finest hotels and most fashionable estaurants. The fact admits of no question hat California champagne has "come to stay,"

And the same may truthfully be said of the California still wines, both dry and sweet. n their many varieties. The popular appreciation of them has been of slow growth, for it has required hearly twenty years to bring them into such favor, but it is now firmly established at last. A number of the more important producers, both firms and companies, now ran their own establishments here in N w York for the direct sale of their wine to consumers without the intervention of middle town. By so deing they attain at least two good results, viz. the supply of their products at prices which, though yielding them a fair prefit, are much below what they could be by any of bor mode of handling practicable; and the absolute certainty that their reputation will not be made to suffer through any of the wicked arts of extension. fortification etc. known to the cummingly middlemen. Selling for themselves they have positive knowledge that every drop of wine sold nuder their brand or label is absolutely pure, just as they made it, and are able to conscientionsly swear to that if required

That is a very important matter, net only for the unmense advantage that it gives in competing with the importers of chear bogus wines, but as the most officethe means of typessing the fraudulent manner of California wine would very soon imitations of California wines manuface be driven out of business.

tis? I'd like to play it on them." The those imitations serves as a r mind r that comprehend now it is that such an anicatary mention is the fraudulent "fizz." falsely called champagn . Genuine champagne, whether made in one part of the world or another, is always produced by one sort of wine on the banks of th. Blanc one and the sum process. The jures of different varieties of grapes, med into still wines, are skillfully blended in varying proportions so as to produce by their combination exactly the flavor, strength and gos in their character, as in the manufactors color desired, are then bottled, and are fere jud French charagages and of Hungarian Tiemented in the bottle. After a certain time, I kar. That different kinds of graps will when that fermentation has rached the proper point and the wine has thrown down its sediment into the neck of the bottle, the sediment is removed by uncorking; a little old wine with rock candy dissolved in it is added to take the place of the wine lost in the process of uncorking, and afferd material for making more carbonic acid gas, and the bottle is recorked. The bogus cheap stuff, mendacionsly called American champagne, is very differently made. A quantity of the cheapest, sour, low-grade wine, hardly distinguishable from provided it is anything like what could be vinegar, is "extended" with water, sweetened with glucose, tinted with aniline dyes, or some other coloring matter, strengthened with alcohol and flavored a little with some extract or essential oil in minute quantities. This concection is bottled and charged with carbonic acid gas made by the action of sulphuric acid upon marble dust. When it is all finished and ready for market, the wire and label upon the bottle on the Pacific slope, viz: The production are each worth more intrinsically, and have cost more, than the contents. Insulting to the palate and injurious to both brain and stomach, the vile mixture should be faboued by law, its manufacture for fools at home made a misdemeanor at least, and its exportation, for the damning of the fair fame of our good wines abroad, be punished as a felony. There are evil practices in the treatment of still wines, to render marketable those otherwise unsalable, to coarsely simulate others of higher grade, or to adapt them to depraved and victous tastes; but these are generally confined to sweetening with glucose, fortifying with brandy, and doctoring the flavor with only moderately harmful substances, consequently are somewhat less abominable than the bogus champagne manufacture.

This is all a very unpleasant branch of the subject and is only referred to as a warning to win drinkers and to enforce what has been said of the anuple security against such dangers afforded by companies dealing directly in their own goods with consumers. Unhappily, since California wine has grown so go atly in require favor, and its production has become a business interest of such enormous proportions, it is no longer a sufficient guarantee of the purity of a win-to-know that it certainly comes from California. There are yet the co ignorant viticulturisits and incompet at ners who, year aft r year, produce only bad with, fit for nothing but conversion into poor vinegar, or to serve as the basis for manipulation by unprincipled men whose madefic skill enables them to make regard to these who are not exper judg s. Both bogus champague and still wine are made there, just as well as in New York. Hence, it is judicious to buy only from thos, of establish d reputation who deal in what they themselves producand if this rule were generally adopt ditu-

one of them especially deserving of evitions variety of wines coin from on part of the all of its own mainfacturer, all periodly country, as we get from California. Their ment division so say ato clearly how it is to collais at an of critical judges be insturally expect I that we should get and mother very different in Friz, because those plants are wet apart. And they may ev n understand how shift r nt medes of producing wines may work extramoch atyield dissimilar juices, of course, "go s with. out saying." Yet, with all this, they cannot believe that it is all right that so many sorts of wines come from California, Well, by us see if it is not. In the first plac , California is a big country. If you were to scatter European principalities around over it, he who went afterward to gather them up would have to employ a guide to find them. And in that vist expanse of territory you can find pretty much the sort of climate and temp rature you may want, expected of a country adapted to the growing of grapes. Rhincland is no colder, nor is Portugal hotter, than places you can pack out in California and grow grapes in. And as diversified as h r climate is her soil, except that everywhere-only in the salt sands margining the ocean, and upon the cloud-kiss d, rocky and snow-capped peaks of her mount diss-it is fertile beyond the dreams of Nature's bounty. The grape vine grows everywhere luxuriantly; Inot more by three or four, or a half-dozen kinds. of grape vines, but fifty, an hundred kinds, any number you choose to plant. Having all those natural advantages at his commund, what is to prevent the intelligent California grower employing any sorts of grapes used for wine-making in any other part of the world, applying any processes in vogue (Isewhere, and producing any number of different kinds of wine that he pleases. That is just what he does do. If he wants a wine that depends for its flavor upon a particular kind of grape, he selects a locality in which that grape flourishes to perfection, cultivates his vines in accordance with the wisdom gained through ages of experience in other lands, where that grape has formerly grown, makes and treats and keeps his wine from it, as should be done, and, after all that, "what's the matter" with his getting the wine he is after? It not an especial grape, but a peculiar process in its treatment is required, such, for instance, as in the making of Tokat, for which the grapes must be left hanging on the vines until they almost become raisinbefore they are pressed. He knows exactly what should be done, and hadons it. Not only in the making of champagne are varions wines blen I d. but in some still wines in only to obtain the volume of on , the b to fascoul, the floored which, and porh qs the color, or fire, the fourth . When that sademad I sirable, where me all the to del wor'd beneath the light of the potent stars can set hefrethte sond advection sher it be for A selection Chiforness Why, it measury so to do the freshly presed prices of the grapes, or the grapes thems lyes or practically limitless quantities, can be, in four or five hours, massel at a entral point from half-a fozon, vineyards from of pure wine as a beverage instead of in hundred nules spart

It werns difficult for many persons to

beauzation, dates for will readily - how it a that our wine-producing one criticales to dirice paper in the State

gether Riesling, claret, sherry, Mal ris. port, Bargundy and various other wines. pure and all so good as to challenge the

It is quit possible that mischief has been lone in the past by the allerdy is definite n ing of some California wines with high ounding From h. Gorman and oven Italian names. The pleast these who have done so has been that they merely wished to milt do that the wine - so listing aished resemble d these after which they were noted by Eson if it was true the moral pupp salon pro light was that they were marations, and consequently open to suspicion. But it was not true. Highly enlight I polatecan detect infinite delicace s of flavor that belong to particular wines, and that cannot b imitated. Imagination helps the polate along sometimes, no doubt, and how far this may go the fanciful steries associated with certain famous brands of wine convey an idea,

Thus it is affirmed that one vineyard has never produced exactly the same quality of wine since a dividing line was run through it, to make partition of ownership, as it did before; that another always produces better wine in the years when a child is born to its noble owners than at any other times; that the wine from a third looses almost all its distinctive flavor if poured into a colored glass, etc. L t that all go for what it is worth, which is brobably very little.

Calling a wine Johannesherger or Cham bertin does not make it either. California wines are good enough to stand on their own merits. With the progress of timeperfecting methods of cultivation and manufacture, it is not at all improbable that we may yet have still wines from the Pacific slope as delicate and perfect in all respects as any that the Old World can boast, and when they come along we may be very surthat names of their own will be found for them. Meanwhil , let us be thankful that we have already from California an overwholming abundance of superb, pure, h althful, invigorating wine, good chough for anybody an Leheap enough for anybody to drink. And let us be content with naming it, in its various kinds, after either the grape from which it is made - as the Riesling, Zinfandel and Muscatel -or a recognized class of wine, such as hock, sherry or port.

The popularization of pure California wine should be a matter of very serious personal interest to all the community of New York, except, perhaps, the 720 persons who voted the "prohibition ticket in the recent electron, and who cannot reasonably be expected to have anything but a thooretical concern about such questions. To those who use vinous, spiritous or fermented beverages, it appeals strongly as ofter ing them a drink that is almost as cheap as beer, yet far more ploasest and b neft ctal, and infinitely less heartful than strong papers. These who I not believe by hink stimulants of my hard will contest scape their share if the common and i estrict plants, to along degree, the exit int xicants now generally used, by a substitute that will liminish frankeniuss, pauperism and crime, or effect that would in vitably follow spon the popular adopatt die dritch

The office was in the composition with

FRENCH NURSERIES.

The description given of French nurseries by Mr. Irving Rouse is interesting. He says that one can searcely imagine a greater contrast than exists between an American and a French nursery. The first thing that strikes an observer in France is the luck of implements considered necessary on this side of the Atlantic. No cultivators, no harrows, no plows and no horses to work them with. Not one nurseryman in ten owns a horse, or has any use for one. The ground, as the Irishman said, is ploughed with a spade, is cultivated with a spade, assisted by mattocks, and the stock is dug with a spade. No use there for tree or needling diggers. It is delivered on the packing yards on wheelbarrows and handcarts, and is taken to the railway station by teams owned or employed by the railway company, and the cost of hauling is considered part of the freight bills. As horses are not used, the ground can all be utilized -no headlands or fence corners left untilled,

The seeds of apple and pear are sprouted in beds after receiving much the same treatment during the winter that we in America give them. After they have made a little growth the young plants are taken np and transplanted about an inch apart each way, in beds about four feet wide The beds have narrow paths between, just wide enough to stand and walk in. After this transplanting, if the season is dry, the beda are irrigated by means of water from deep wells, raised by windmills or horsepower. The weeds are pulled out, but no cultivation, of course, is possible.

In the plantations of larger stock, the forest and shade trees are usually planted in the same manner, except that each tree is a foot or more apart such way and the paths are left out. Our system of deep cultivation is, of course, not possible—the only thing that can be done is to keep the ground clean by hoeing, and the surface loosened up. The ground is manured heavily and at great expense, the fertilizers being all carried from the compost heap in baskets on the backs of the workmen. If some of our people who think they have had a hard time could see women packing out manure at forty cents per day for twelve hours work, they would conclude that there are people worse off than they, and a worse country to live in than the United States. A firstclass workman receives from four to five francs, eighty cents to one dollar per day of twelve hours, and is then competent to take care of a gang of men. The bulk of the workmen receive three francs or sixty cents per day of twelve hours. In the districts near Paris they get rather more, while in the Cologne districts they average but two and a half francs, or tifty cents per day. Land, on the contrary, is exceedingly high--\$1,000 per acre being the average price of some eight or ten concerns near the larger towns. The dearness of land and the cheapness of labor account for the lack of labor-saving machinery, and the cheapness with which stock is produced.

A first-class standard apple in France must have a stem at least six feet without limbs, and are frequently ten und twelve feet high. Cherries and pears are grown in the same way. They are, of necessity, older, rougher and not so bright as our treea. The green moss must, as a rule, be scraped off the bodies before being delivered. The extra age and size makes the price high, the ruling figures being thirty a market.

cents for standard pear, twenty to twentyfive cents for standard apples and twentyfive to thirty ecuts for cherries. The tree agent and dealer is not known in that country, most of the orders coming direct to the nursery. A good deal of stock, however, is sold at the fall fairs. The peasants come in from the surrounding country with a cartload of trees, and the nurserymen say that the peasant seller always has on hand any sort the customer may ask for.

The conditions of climate are quite different from ours. The winters are not so cold as ours in the north, nor the summers so hot, tender plants like the Camelia flourishing on the West coast, while one hundred miles inland they cannot be grown at all, indicating a difference equal to that between New York and Georgia. Their elimate and soil produce fine trees and fine fruit, and we are indebted to the French people for many of our finest sorts, but neither the Frenchman, nor the Englishman, nor the German, know what it is to use fruit as we use it. In no city in Europe can you buy as great a variety of fine fruits as in New York, and in no country in Europe is fruit within the means of the working classes as is in our country.

NATURAL DRYING

The enormous fruit crops of California, observes the Sutter Farmer, have called into life a great canning industry, which will soon, it it does not already, excel that of any other State in the Union. Fruit is thus rendered imperishable, and can be transported to the furthermost limits of the earth. But while selling our fresh fruits in limited quantities to our own cities and to Eastern consumers, we had almost forgotten our drying facilities that could consume the entire product of the interior in the orchards where they are produced, and being thus rendered imperishable and reduced in bulk, can be drawn many miles to transportation lines, and also, like canned fruit, will go to the consumer in every country. It is worth while, then, to look about us and make such discoveries as the merest novice may see for the looking, Our warm, clear, rainless and dewless Summer climate gives to our State fruitdrying facilities enjoyed by no other fruit country on earth. No artificial dryer is needed. No wood, coal, oil or any fuel is required whatever. The fruits need only to be spread to the sun and allowed to remain untouched until dry and ready to be packed for shipment. We talk about the very great advantages of the wheat-growers of the State, but they are not to be compared to those enjoyed by the fruit-grower who dries his fruit. As we contemplate the business we can see platforms made of wood or cheap material stretched along between the rows of trees, and the fruit transferred from the trees to be dried, and in from three to five days taken up ready for the market and replaced with another complement. If the climate and consequent improved machinery of California can force the wheat growers to the wall, the natural California fruit-drier can force all the competitors over the "wall," no matter how cheaply he gets his labor. Men talk about over-production of froit, with the hundreds of canneries and "all crea tion" as a drier-it is impossible. As to a market, our kinds, varieties, qualities and

DRIED FRUITS.

A Philadelphia magaziue— $Table\ Talk$ has an intelligent article upon California dried fruits. It says that the specimens of evaporated and canned fruit that have gone East from California give people there a hint of the great possibilities in this direction. The peaches have been good, though lies have them by the tens of thousands. not so desirable in flavor, in the opinion of our contemporary, as the best Delaware frmt. It is probable that the editor of Table Talk has not had a peach from Placer county yet. What he has seen must have come from some other State. But he says the plums and prunes have been very fine Raisins have been improving, and it is hoped that in time they will equal the Malaga frmt. Some specimens of almondand valuats have also been very creditable, and our olives and olive oil have been praised very highly.

The article then calls attention to the Dried Fruit Association, which has been organized here for the purpose of raising the standard of quality and values; +xtend ing the scope of sale and consumption of these California products; diminishing the cost of selling to the lowest point consi t ent with good service: regulating shipmentto the various markets so as to avoid: surplus in some and a dearth in others If, says the Philadelphian, the association will honestly carry out the ideas expressed in its circular, there is no doubt that the advice, suggestions and information which can be given to the finit-grower, will result in better goods, and increased profit—and the fact must never be lost sight of, that unless an industry is on a profitable basis, there need be no hope of its permanent development. But, if the exchange to be established is simply to be another gambling institution, like the Coffee Exchange of New York, where goods are not actually sold and bought by legitimate tradesmen, but where, practically, bets are simply made by ontside parties upon future prices, then this association will simply be a curse to the fruit-grower, the dealer and honest people generally. If the exchange, on the other hand, remains entirely in the control of business men and confines all its business to bona fide purchases and sales of goods, it will, no doubt, prove beneficial to

RESISTANT GRAPE STOCKS.

The phylloxera feeds alike on all species of grape, says the American Garden. But the European grape has few lateral fibres in comparison with some American species, They give up as soon as attacked, while the Americans send out a number of later fibers, which go on as if the main roots were not attacked. The well-known Clinton grape is one of the easiest to be obtained of all these resistant grapes-resist. ant not because they escape attack, but because they look on the attack as a mere "flea bite."

Tue State officers of the State Viticultural Commission have organized an exhibit, which will prove as interesting to the general public as it will benefit the wine producer. The policy outlined by the Committee is one which cannot fail to meet with the approbation of everyone connected with this important industry. It is fair to all, and opens a new channel for busiexclusiveness gives us the whole world for ness, which will undoubtedly lead to most important results in the future.

OLIVE PLANTING.

Indications are that a very large acreage of olives wifl be planted this coming season. In many places we have visited, we have noticed little private nurseries containing from 500 to several thousand trees all ready to plant, and the regular norser-

We are glad to see this, for there is little doubt of an olive orchard being a profitable one. Great care should be taken to get these orchards on suitable soil, for the olive on an uncongenial soil does not do very well, and is continually disappointing in its crops.

With us here in the Santa Clara valley such a soil as is good for the best wine grapes is also good for olives. They should not be plant doon an adobe soil to secure the best results. They will grow and they will bear on such a soil, but they are not truly at home in it. So far as we have neticed, the trees bear best when planted on soil that is gravelly and that is well brained, so that there is no stanling water vithin many feet of the surface,

One must not plant the olive expecting in casy task to care for the trics. Eternal sigilance is the price of clean olive treek, and one might better not plant than to plant and neglect,

We advise in all instances planting thirty to hirty-three feet apart, the latter distance probably the hest, and covering the rest of the ground with grape vines eight and onefourth feet apart.

It will be, at least, six years before the olive trees will begin to yield much in the way of a crop, and long before that time the vines will be giving good fair returns tor all the trouble and expense of planting. After six years the olive crop will be an item that will continually be growing larger, and at ten years the olive orchard will lead, and perhaps before that time. But for many years a central row or two of grapes will not be in the way, and will help materially.

Olives are just about in the proper coudition now to gather for green pickles. They should be riper for the ripe pickles, and still riper for oil, and many orchards will not gather them for that purpose hefore March or April .- Santa Clara Valley.

EVILS OF EARLY PRUNING, +S. W. Kirkpatrick, a practical orchardist, contributes the following to the Gilroy Gazette on the evils of early pruning: "I would like to say a word of warning to orchardists and vineyardists upon the subject of early pruning. In our mild climate of California wa are apt to begin pruning too soon, especially early apricots-such as Early Moorpark, Royal, etc. These should not be pruned before the 15th of December. Bartlett pears, early peaches and cherries are also subject to the same natural laws. Why is this a correct theory? I speak from personal experience, knowing that in nine cases out of ten early pruning has a very great tendency to produce early blooming on fruit varieties. For this reason, and by practical observation, I do not approve of pruning too early. Besides, we have had, of late years, spring frosts, that are apt to catch much of our early fruit when in bloom, and this is just what all who are engaged in fruit culture must avoid, if pos sible, as frost to a tree-bloom means certain

CHESTNETS IN CALIFORNIA

In the following arricle on this valuable ree, R. S. Sucath of San Brano, says he dition says

"The Spanish or Sweet chestants castpres resear, is a stately and magnificent ree, native of the courties beriefing in the Mediterranean, but also repening its ruit in shelt-red situations as far north arge size, spreading its branch's wabiy The largest known chestnut tree is the amous Castifua do ce to consist ou the hestnut of 100 horses, on the slep s of doubt Etha, a tree which, whom is itself ver 100 years ago by Count B rela, was ound to have a sinumference of 190 feet The wood of the sweet chestnut is value y cabinet-makers and coopers, and among Inropean timbers it was at 1950 time is eemed second to the eak, which it s losely resembles that in all was dwork the wo timbers are very difficult to liste grash The trees are very abundant in the south f Europe, and chestnuts back largely in he food resources of the poor in Spain. taly, Switzerland and Germany. In Italy he kernels are ground into in an and used or thickening s ups, and even for bread laking.

A. J. Downing, in his " Lau iscaps Gurening, save

"The chestnut, for its qualities in Landscape Gardening, ranks with that ing of the forest, the oak. Lik that tree, attains an enermous size, and its ionevity in some cases is almost equally retarkable. Large quantities of the fruit n ovens and stored away for the winter's onsumption. The tree, when young, has smooth stem, clear and bright foliage, nd lively aspect when adorned with the umerous light greenish-yellow blossoms raking it a graceful and beautiful tree."

CALIFORNIA EXPERIENCE.

About 1570 I planted a few Italian chestuts on my place at Fair Oaks, near M-nle ark, which I hear have been bearing well earing nuts for three or four years. Last | soil constantly. all I saw two trees at Grass Valley, The chestnut will do well along the coast auch as for fruit of any kind,

seede, of course, but, having the world for a world for railroad ties. market, there would be, no donbt, a There is less difficulty, perhaps, in plantlying our own country with them

but little care, even at five or six years of has received heretofore on this coast. lage, by cutting off the taproot to about six [elieves its cultivation is deserving of (meh s in length, after the first years) nuch more attention throughout the states, growth, I would take them out of the nurs-The "Encyclopedia Britannics, much ery row then, out their roots off smoothly,

about three feet space in the record to helpful ris lass reals as for ege of four er use years I would transplant to the fields.

The tree would permaps thrive better to put the sood where you not adod the tre s Scotland. It has very long attants of the grow, but there would be a loss of the pase of the fill becafes years nor and a greater east for protection and softwitten

There are more holosides in varificial that are be storp and booken to cultivate with ploas that we all be as venille for chestnutures as in crelevel land. By planting classic, and then thinning them see from time to him, this would be not profit, perhaps, than in giving them, the questing would be attachy require.

Animals of his the put 1 b have and if to note a display to gether a few er - d 2 and in the shape of a wood let. yould noke a goard place to fatten hogs

In good, rich, most sal, I believe, trees could be brought to bearing within if ar or ave years, and if alternated with peach trees would require all the ground when the carrier had outlived their usefuln as the planting sold viry thickly, a crop of hor poles and poles for harrel hoops could be taken off annually, as the stumps sprous vigorously after the tree has been cut down

I expect to utilize the wasterplaces on my farm by setting chestnuts out whenever I can, and where cattle would not disturb thom. They are well calculated for roadre collected in France and Italy, and dried way trees, clusters to protect cattle and a woodland, or rough, rocky, waste places as well as for landscaps purposes. The tree being deciduous, it is not objectionable, like evergreen trees, which prevent the sun from drying up the roadway in the thich project beyond the mass of leaves, winter season. Neither are the roots ofjectionable, like the gum tree, in impoverishing the soil about them. The only objection I have noticed in the chestaut was that it produces quite a litter of leaves, shells and burrs on the approach of frosty or the last 12 years, or since I left the weather. This vil is not unmixed, howlace. Here at San Bruno I have a few ever, as this same material will f-ruliztees that are 12 years old which have been and malch the trees and thus improve the

ievada county, about 20 years old, prob- in the warm vall ye, and to perhaps 4,000 bly 15 inches in diameter and 40 feet elevation, and from Sin Diego to igh, and said to bear a barrel of nuts to Puget Sound, no doubt. The growth is not ach tree regularly. These nuts are now as rapid quite as the gain tree, but more elling in San Francisco at 15 cents per so than almost any other tree grown here. ound, and a barrel, if weighting grant except, perhaps, the poplar. The world is ounds, would bring \$30, and an acre valuable for many purp ses, and specially ith 33 trees, about \$1000, or quite as for fence-posts and fencing lumber, also, anch as for fruit of any kind house frames and inside finishing, cooper-With a large production the price would age, and perhaps chestuatis in xt to red-

easonable demand for the note during ing the not successfully than that if any heir season. Large quantities have been other tree soil, is the not is large, and if hipped from Italy, which have arrived sound and frish will grow well if a hole is ere in excellent condition, and there is no simply functed into the ground with a eason that I know of to prevent our superstick three or four makes deep in less ground, and besit in hard ground.

Last year I planted a good many nuts | California diestuate that are quite fresh long the creeks and washouts on my place can now be had at almost any place white If then planted them in rows in my nurser for winds, as an experiment if nothing more, but very and now have a considerable number. They will do better by cultivation, but very with \$50 in summer and \$50 in winter. At

FRUIT BRANDY LIGISLATION

For them to the row, giving the mover having from branch, approval also month. A point Virginia money out through spaces in the row. At the logist risclose from the row with the row of the logist risclose from the row of the row. A remark to the same of I had the provisions from act entitle I. Ab act rock ting to the production of fruit brandy, and his family to punish from leadent et al with the same," spir vol. March third, eighteen hundred and so ventyes vin. le extended and had apply able to brandy distilled from apples or yearless or from any other fruit the brandy distributions which is not now repure for here dier shall not be required to be discounting a discourty warehouse In Mail, That each of the wark uses established under sailact, or which may here after the established shall be in charge eith roof the storoke per or of a strokeeper and gauger, at the discretion of the Commissioner of Internal R v muc.

> the provisions of this act, the Regulations of wichers on this and the berries are is not under the sail Act of March 3, 1877, small I for and all iming this I planted in ments N s. 1 and 2 theretic are hereby executions. The growth of these has been tended and made applicable as well to very fine, and the tro-have been bearing brandy distilled from appleant peaches as for the last sight wars, the crop being to brandy distribed from graps so

Special bended was houses may, therelished, and be removed from one warescribed in said regulations.

Jos. S. MILLES, Commes of the Approved November 5, 1888

HUGH S. THOMESON, Add Something of

----WAGLS IN 1800

The condition of the wage cass of that day as detailed in McMaster . It story may be well examined, it is fall of instruction for social agreators. In the great cities enskelled workmen, were hired by the day, bought their own food and found their ownledgings. But in the country, on the farms, r where ver a head was employed on some public works, they sore ted and lodg ddy. the employer, and given a few delices a month. On the Pennsylvania canals the diggers at the coursest diet, were housed in the rule stesh de and paid 56 a ment... from May to Nov mber, and 55 a month from November to May, Helicarriers and mertar maters, bugs result happens who from 1793 to 1800, labored on the pulsabuildings and cut the strets and avenues of Washingt in City, is elieved \$700 a year, or, if they wish d. see fir an the wirk they could perform trong March 1 to fail rate vevez, who wants has customers Domber 23. The bars faw rk was no variably from summer to subset. Will seit ere, but, neglecting to kill off the squire buts are k.pt. and later on Italian chests. Alliany and N. w.Y. ik wer. Combines. T. els before planting, they followed my men muts will be in market, so there will be no as memby then whit, the first a day, it

to transplant when old enough. I find that well without it, and all in all I faim if r Bonco re in n wir gight be hired at 18 they can be transplanted safely, and with the chestnut much more attention than it penss a boy N we, by the month, asked but little care, even at five or six years of has received heretofore on this coast to be rething the Att. Fr. broksburg, the pro- filler wis fr m \$7 to \$7. In Varginia what is enoughly liby the year were given also carring slaves, when An Air mill 1: An Air to provide or her hower of the hand their masters paid wish to Entrade the State The averso retail for a site used over was, therefor the open with find and perhaps their other this small sum the workrish most with his wift a holy maintain

OLIVE CULTURE.

Wire F. Higgs of Sire Vista, Som his views to the a setter by a septemporary gives his experience with the Mission and Prob. in war to a follows, which, in view if the introduce who ing taken in all that perturbation the variable to list wirthy of reir da ti n

In Issu It make to u. Mr. West of Stockt n fifty Pack line law trees. These were planted with hills, boing it, rich leamy soil and have been well continued each year. This is the first year that any of For the purp woof carrying into off et then have born, fruit-a few trees having sontained in Senes 7. No. 5, and Supplements relate at it about a hundred Mission office heavier such year. They are free from all passes in practitely of the black scale, fore, now be established under and in which much its appearance some two years strict compliance with said regulations for 32 Was some versual by an application the storage of brandy distilled from apples of a bash of a neutral dilye, whale oil peaches, or grapes exclusively; and the warp dill shigher, applied at 130 degrees brandy distilled from these fronts may be Fahrenhett in July. The feelowing October removed in bond from the distillenes and we gave the trees a weshing of salsada and deposited in such warhouses, when estale water at the same temperature. The trees are posited twenty-four feet apart. The house to another, or for expertation, in Missi notres planted in 1875 are from ten the manner and under the conditions pres to twelve in he s in home tir, and the Pichoding plant lin issue the largest, are about four meh - in diam t z.

POOR SPANISH RAISINS.

. M says The quality f Viletinian one forel the tride lately has been anything but satisfactory Many sign on whise chief aim is to furnish silg sils to his trail has already found this fact of and others will later on.

A rong I run for the crop this season has been son as you, or bely run, and in very many matter, is the first was not fit for casampton. The spanish packers, disregaring the white - of many of the requebre pack lith to no betes, and the silence are to a in this country. They has an object of our the buy-replaced go limit in the tig and the poor below. so that the grown when he on the top my, here he is a time the same grade after beautiful to your lonly discovers his mistik which is given retain them.

Similar to the that has discovered the track of the Spanish traders offer it, so they about the development at the low process richt tri them. Thereto her a lar is, see not want these rushes it may from the green who In greer who heart one what kind has customers get, wants to not all surface in a mat paying Adams to the s

Salama free Mariana

TREATMENT OF BLACK ROT.

In a report made to the French Minister of Agriculture on experimental tests in the treatment of the disease of the vine which has long been known in America as "Black Rot, " M. Prillicux says:

It has unfortunately established itself in France and is continually spreading, "We hoped for two years after its discovery in 1885 over a very limited area in the clevated valley of Hergult, that it would remain within these narrow bounds, but as early as last year I observed several new centres of the disease which were scattered here and there through the valley of Garonne, between Agen and Aiguillon, in the elevated valley of Lot, beginning at Figeac and also in that of the Tarn near Milban and of Affrique.

This year it has been observed near the fine vineyard of Aigues-Morte by the side of Luncl, and in Gironde at Cerons not fan from Sauternes. This very morning I have discovered the existence of a new centre of infection in Charente, a region hitherto free from the disease, haying received specimens showing the positive characteristics of Black Rot upon grapes and leaves from Chazelles,

If one has witnessed the terrible losses caused by Black Rot and seen how rapidly it destroys an abundant crop, he cannot refrain from having grave fears for the future, although for the present the disease is confined to a few isolated points.

In the reports which I had the honor of addressing to the Minister of last year-after having visited the vineyards where the Back Rot had appeared - I drew special attention to the early date of the attacks of the disease upon the leaves. From the leaves the spores are scattered upon and infect the berries and with this in view, I expressed a wish that the experiments of treatment might be commenced in good season and followed out with care and patience.

A small infected area situated at Aignillon in Garonne at the mouth of the Lot and be particularly adapted for use as an experimental field for trying the remedies.

M. Despeyroux, the proprietor of the vineyard, consented to give his assistance to all the experiments. I wished to undertake, M. Lavergue pharmacist at Aiguillou, offered to undertake the personal supervision of all experiments which I should indicate to him. You yourself were willing to grant to me (nuder conditions which should be exactly determined) the necessary funds to ensure the testing of the trial remedies for Black Rot,

In the fall of 1887, while the berries that had been dried up by Rlack Rot were still hanging to the vines, I asked M. Lavergne to take the first steps in the plan which I had adopted for M. Desperoux's vineyard. by carefully marking all the diseased vines. After obtaining these exact data I could organiza the plan of my experiments for the following spring,

The part of the vineyard reserved for the test comprised eleven successive rows each ling: containing fifty vines.

Three rows (6, 7, & 8) traversing the midst of the infected area were reserved as Row 10-78 per cent. healthy, -22 per a check lot and not treated.

The three following rows (9, 10, & 11) were treated with Bordeaux mixture, In the first two treatments (May 22d and June 23d), the mixture was made with different degrees of strength for each row; for the first (row 9), 15 lbs. sulphate of copper, 30 second (row 10), 13 lbs, sulplante of copper, 13 lbs, of lime; for the third (row 11), 6 lbs, sulphate of copper, 4 lbs. lime. In the two List treatments made, July 2d and 19th, the strength of the mixtures was the same for each row, -13 lbs. sulphate of copper and 13 lbs, lime to 22 gallons of water,

The three rows situated on the other sidof the check rows were also treated, the first two (3 and 4) by can coleste, containing 2 per cent, of sulphate of copper for the first two treatments, and 3 per cent, for the last

Finally, upon the last two rows (12 & 13) in the plot, different powd rs w re applied; for the first two treatments, empric steatite, carrere pewder, and a mixture of 1-10th sulphate of copper and 9.10ths triturated sulphur; and Bordeaux mixture, composed of 13 lbs, sulphate of copper and 13 lbs. lime, for the last two treatments,

Black Rot spots on the leaves were distinctily seen June 8th, but only on the untreated rows. Under the influence of a moist environment, the disease progressed in spite of the first treatment and by June 18th, the leaves were everywhere attacked, but in very different degrees. In the check rows scarcely a leaf was intact, in the treated rows, especially those treated with Bordeaux mixture, the diseased spots were very rare.

The applications were repeated on several occasions.

The first attack on the grapes occurred July 12th, when some of the berries on the untreated vines showed the disease. July 13th, the three check lots were everywhere attacked and the disease had invaded some clusters in the treated portions. Under the influence of constant moisture and a somewhat warm temperature the disease made terrible progress. By the 16th, the crop on all the untreated vines was lost, but the treated vines, especially those having received the Bordeaux mixture, were resistant. Auother application was made July 19th. At this date the diseased berries which up to this time had been reddish brown, because covered with fruiting pustules of badly diseased since 1885, seemed to me to the parasite and assumed the black color and wrinkled appearance that is so characteristic of the disease.

> M Lavergue carried the entire experiment through with a painstaking precision in all its details. The number of healthy and more or less diseased berries was exactly noted for each of the 500 vines. I shall at a later time have the honor of presenting a full account of my researches, but I wish to acquaint you without delay with some of the more striking features which were apparent on the examination of July 25th,

> In the three rows of untrested vines the fruit was completely destroyed, as is shown by the following figures:

> Row 6 (check) -10 per cent. healthy, -90 per cent, diseased,

Row 7 (check)-2 per cent. healthy,-98 per ceut, diseased,

Row 8 (check)-0.23 per cent, healthy,-99,77 per cent, diseased,

The contrast with the following rows treated by Bordeaux mixture is very strik-

Row 8-96 per cent, healthy,-14 per cent, diseased.

cent, diseased.

Row 11 -75 per cent. healthy, -25 per cent. diseased.

The treatment with can celeste was officacious, but in less degree; in the third row, where the best results were produced, there were 42 per cent, healthy and 58 per cent, lbs. lime, to 22 gallons of water; for the diseased grapes. In the next row, the pro- 715 grain distilleries, having each a daily mance gives value to the commodity.

portion is 25 per cent, of the healthy, to 75 per cent, of the diseased, but it should be mentioned that this row was badly attacked by the Authraenose and its ravages may have been partially unfounded with those of Black Rot.

The simple solution (two or three per cent, solution of sulphate of copper) gave only very moderate results, the proportion heing fifteen healthy to eighty-five diseased berries. The powders also gave very little satisfaction since they were subjected to incess int rains.

In a future report I shall have the honor of presenting and discussing the numerous data furnished by this experiment. It demonstrates with perfect certainty the fact, long suspected but not positively established either in France or America, where the disease has ravaged the vineyards for several years, that Black Rot us well as Mildow may be airested by copper treatments if the applications are made at the proper time and in the right manner,

The success of the experimental treatment at Aiguillon in a year when the atmospheric conditions were so exceptionally favorable to the disease, as is shown by the total destruction of the crop on the untreated vines, is a certain assurance of future success, and we are safe in concluding that we may combat Black Rot by the same means that we do Oidium and Mildew.

FREE FRUIT BRANDY.

The annual report of the Commissioner of Internal Revenue, for the fiscal year ending June 20, 1888, has just been issued in complete form. In dealing with the proposed reduction of the revenue by this removal of tax from fruit brandy, the Commissioner says:

"It may be observed, in reference to the proposition frequently made to remove the tax from brandy distilled from fruit, that it appears to be probable that the relief of this article from taxation would lead to the utilization of a large number of different fruits for the distillation of spirits, and to the production of an additional volume of such spirits, which might reasonably be expected to have an appreciable effect upon the tax-paid grain and molasses spirits with which it would come into competition. Under the present law, which practically confines the brandy producer to the use of apples, peaches or grapes, and despite the indiavoi to exercise as close a supervision as it has been found practicable to apply to a business carried on by so many individuals and scattered over so large an area, it is supposed that a considerable percentage of the product escapes tax; and even this amount is the subject of complaint from the distillers of whiskies, who declare that it is percentibly felt in some places.

"If then, in addition to this fraudulent quantity, the whole legitimate product of fruit brandy should be put upon the market tax free, and this should again be swollen by the unrestricted use, not only of apples, peaches and grapes, but of any and all other fruits, under the inducement offered of competition with whisky and rum loaded with a tax of 90 cents a gallon, I believe that the grievauce to the whisky producers would prove not to be an imaginary one, A large quantity of free fruit brandy would surely be marketed in localities where the smaller grain distilleries are mainly situated, and could not fail to seriously affect the business of the latter. For instance, during the last fiscal year there were operated spirit-producing capacity not exceeding 30 gallous. Of these, an average of not far from 350 was in operation each month. In the same collection districts there were operated, at various times during the fruit senson, 2065 fruit distilleries. In good fruit seasons twice this number of fruit distilleries are not infrequently operated.

"If all restriction and limitation were removed from fruit distillation, and the stimulant of large profits added, the disproportion in numbers between these fruit and gram distilleries, and the product of the former, must speedily increase. The circumstances would offer to the small grain distillers the strongest temptation to meet the free fruit spirits with illicit grain spirits, just so far as might be found possible.

"The reduction in the revenue by the abolition of the tax upon fruit braudy is not, therefore, I consider, to be measured by the subtraction of the present collections from that source,

"A considerably larger amount would, in all probability, be lost, while mischief to the revenue service, and increased difficulties in the enforcement of the law as to grain and molasses spirits, out of all proportion to the amount of tax surrendered, must be seriously apprehended,"

THE HOME OF THE HOP,

Puyallup valley, the center of the hop industry of Washington Territory, says the Scientific American, has recently completed the harvesting of an enormous crop and its farmers are congratulating themselves on the price obtained-twenty-two cents per pound. The total cost, baled and delivered at the railroad, was nine cents and the yield exceeded one ton to the acre. The climate and soil of the Territory and of this particular valley, is so well adapted to the growth of the plant, and its freedom from the pests of lice, mildew, and other drawbacks experienced elsewhere, is here so umformly complete, that a maximum annual yield can be depended upon with the same certainty as the summer's sun, The only "glorious uncertainty" about it is the market price. As this fluctuates from five to one hundred and twenty-five cents per pound, according to the supply and demand, the business is truly exciting,

An extensive grower, with hops at five cents per pound, finds himself unable to meet his liabilities, while the following year the same hop yard may pay a profit of \$1,800 per acre if marketed at one dollar per pound.

As the land cleared of timber and planted with vines, in rows seven feet apart and properly pooled, costs \$300 per acre, to which must be added a kilu or oven for drying and other parapherualia, a man of small means can only commence on an extremely small scale.

The picking, which constitutes one-half of the expense of raising, is done by hand and must be paid for in cash every night. It fornishes light and agrecable employment for men, women, children, Indians and Chinese. The two latter excel the whites in rapidity and thoroughness. One dollar per box holding ten bushels is paid for gathering, and nimble fingers are necessary to fill two hoxes per day.

The drying of the herb in the ovens is a delicate operation, requiring the experience of an expert, as its proper perfor-

LONDON'S WINE VALLEY

The following interesting description of he dispositions of choice liquors in the critish metropolis, is extracted from a reent issue of Tid Bits:

The total floor area at the violes of the ondon decks is a million superficial for nd in this space, \$3,000 pip s of win a a ssily be stored, and this room found for 5,000 casks of brandy. The vinous aults are built in the form of a crypt he largest of thes the east will took es four acris of ground, and as we tak ur light, a small oil lamp fix dit etim en i f a proce of wood some eighteen mehing, our gorde informs us that there are i this cellar alone, twenty-on and so of sautling wire, or ministure craft cay lines. ver which the berrels are roll di-

The roof for varils and yur is is $\psi(v)\tau$ ith a beautiful species of fought, the rowth of which is due to the four sof to ine, a p cultarity which is all the men oticeable, as where no barrels find a torary resting place, no fungus grows of t is as light as feathers, and takes nest elaborate and artistic forms - 2 illocks, gigantic bunches of grapes than opes which a path of the breath was stiqa two, while such delicate d signs are to e found here as to make the baser of he nvy the patterns. In the midst of all this inshrooms grow, and in the scason a 2003 rop is always secur d.

"The Drawing Room" covers marly ar cre. This is a private vault, scrupulously lean, the sawdust carpet unspotted. It rented from the company by a well nown firm of wine merchants, and as we xamme a cask called "The Duke," we earn how testing is managed. The bong f a barrel is never removed for testing urposes, but the attendent has to bore a mall hole in the cask, and the wine flows nto the "d ck" glass. The taster having atisfied himself as to strength, the flow is topped by the insertion of a small stick of rood. Every hole has to be accounted for and the total must correspond with the number of "tasting orders" issued from he owner's office. Sometimes a whole parrel rnns away in tasting.

The brandy cellar covers about seven cres of ground and some 21,000 casks are esting there just now, but during the ranco-German war the authorities conrived to provide accommodation for 72,000 asks. All the brandy was driven out of rance; its value was \$15,000,000, and an fficial who helped to receive the barrels t the time, has made the interesting calulation that if they had been placed in a ne they would have stretched for thirtyour miles. There are casks of brandy ere-profusely decorated with cobwebs ver twenty years old. One of the gangrays is nearly a quarter of a mile long, nd in the midst of this huge cellar runs he snow tank, into which all the sluice, now and mud of winter is poured,

The "vatting floor," where brandy is mproved by mixing one quality with an ther, contains some of the largest spirit eceptacles in the world, gigantic yellow ubs symmetrically made, on each of which s painted its holding capabilities. Here is ne which requires 10,000 gallons of liquor o fill it, another takes 3,000, others 2 440, ,450, 1,500 and 530, something like a bousand gallons of brandy running through he taps every day.

The mixing process has ceased at the noment of our visit, but it is whispered ast in another corner of the dock a large

rel, holding the modest quantity of 5,070 finally the case is locked. gallons-into which the gin in its unsweettheil state is to be poured, as on one floor. Above it, immediately over its huge mouth s are epening some yards in length, and and makes deep by nine makes with, and, into this a rivulet of ein is downer from the interior of five large cosks which are l toptying the insolves into the barr I below As soon as these are empty, others take th ir place, and the "vat filled, the sugar in a liquid stat is added, the whole mixed logeth roand shortly afterward it is bottled, sent abroad and approved of as the choicest Cream of the Vadey

A word do it the bottling department. As fast as the wine is put into bottle it goes out for export, the number of dezens scaled, ded decapsul dand packed meas severy sy, being 100 . A good pocker cin cas, a n bulled dig and offices between S and 11. Slock in the morning. In the cellar bewith bottle giro to where, br-the-bye, athough the collar is lighted with gas,

quantity of gin is about to be converted receptacle containing a small spirit lamp, therefore, ardent spirits in the State have into "sweetened,." The "sweetening" bar- which keeps the wax in a liquid state, and item channe over the idea of having the

SIXTY MILES TO THE MOON.

The following is from the Boston Heraic of recent date, and is head d. "Bragging suppowered to order of Mr Clark a fortyto Some Purpos twelve years ago, the Lick Observatory of within a distance of savy miles, and California ordered of Mr. Alvan Chirk, of Cambridge, Mass., a thirty-four-inch object glass for a telescope, the size so med so propost rous that, taken in connection with 1 years to deat in, and \$100,000 to oil the the rather chances name of the denor of way, Mr. Clark says he can accomplish the the funds, it looked like a fair and square notice to the universe that California intended to lick the whole astronomical world, Washington, Oreenwich, Paris, and St. Petersburg included. What was more to the purpose, she actually did it. A glass soods will germinate as freely the second of such power was constructed as to bring, year as the first. The length of time for the moon within 200 miles of San Fran- which sieds can be relied on varies concisco, and so to formsh its citizens with a siderably, a cording to the conditions under lunar line imme asurably shorter than could which they are kept. A cool, moderately the distributes can be placed side by be loasted by any rival city. One would dry place is the best for the preservation of at the floor the barrels are kept, and think that that were laurels enough for a seeds, measure and varying temperature and the caller is lighted with gas. State searcely forty years old. But no, the are detrimental. Beans, pears, pepper, rity-four lamps are needed for dark days, glorious spirit of brig, finely developed as carret, corn, egs-plant, okra, salsify, one of this being "Davy's." Here in it may be on the Atlantic coast, swells to one corner are the way pans, the merchants sublimer proportions, when it catches sight years; asparagus, endre, bettuce, parsley, not only having to provide their own bot- of the immeasurable Pacific. Everything spinach, radish, are safe for three years; in California has to be on the scale of the croccoli, canbiflower, cabbage, celery, turnip ties and labels, but way into the bargain, It takes five minutes to melt a pair of way. Pacific. The trees must be 400 feet high, are safe for four or five years; best, encom-It is placed in a copper pair, heated over a and potatous four to the bushel. Why is the remotent, pumpkin, squash, and tomato

mo in as much as 200 miles away. It has been making them feel so lonely that at last the discontent has found vent on a promisry scale seminous that the University of Southern California has been "When some theory two in holens, that will bring the moon se serve Mr. Lick himself sance with which he served the rist of the world, With five

VITALITY OF SEEDS

A horth-ultural authority tells us that thyme, sage and rhubarb are safe for two gas stove, and when melted is placed in a equally, observatories. For some time, seeds will grow when six or ten years old,

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FRIDAY..... DECEMBER 21, 1888

THERE SEEMS to be a revival of confidence in the future of our vincyards, and there is now more talk of planting additional acreage in vineyards than of rooting up those already planted on account of a few set bucks, which are confined to the wine industry alone. The market for our wines is yearly becoming larger, as they become known, and each season brings with it improvement in quality the result of increased experience. We are gradually passing beyond the experimental stages, and the future is bright with the promise that California must eventually lead as the wine producing country of the world. Estimates of the supply of wine two years old and upward are small, with all stocks being rapidly reduced. This strengthens the opinion that better prices will rule this coming

The plan adopted of drying the surplus crop has worked satisfactorily, and while benefitting the wine makers by limiting the output, it has enabled the grower to realize a fair profit on his crop.

The raisin season has proved highly renumerative to the producers. The crop has been large, but even then insufficient to supply the Eastern demand. From Fresno alone the shipments amount to $\pm 50,000$ hoxes, or 9,000,000 pounds, and the crops from other sections of the state will be fully as much more.

THE AGRICULTURAL Department at Washington has appointed G. P. Rixford, of this city, to make up a collection representative of the fig industry of California for the Paris Exposition. It is d sirable to make the exhibit as complete as possible, and with that view, choice samples of dried figs of all varieties grown in the State, as well as crystallized, pickled and preserved figs of all kinds, are wanted. Parties able and willing to contribute to this display should pack the fruit in the most attractive style and forward by express to G. P. Rixford, care of the State Viticultural Commission, where express charges will be paid. As the time in which the collection must be made up is short, it is hoped contributors will be prompt. Further particulars can be obtained by addressing G. P. Rixford, 528 California street, this city.

A NEW ORDINANCE, adopted by the Board of Aldermen of New York, requiring hereafter that all vegetables, fruits, and berries shall be sold by weight, and that the weight or contents of every package to plainly marked on the outside, will interest Cali- In commenting upon this increased profornia shippers, especially Section 3, which is as follows:

" Every burrel, bag, box and basket and crate of vegetables, fruit and berries off red or exposed for side, or sold in any of the public markets of the City of New York, or within the limits thereof, or in any of the public streets in said city, in any other way than provided for in previous sections, shall be labeled, stamped or marked outside thereof, in plain letters and numerals of an inch in size, with the equal and correct measurement or weight of the contents thereof."

The ordinance must receive the approval of the Mayor or be passed over his veto before it becomes a law,

Some grapt-growers in the Housatonie Valley, Connecticut, have had the leaves of their vines eaten on the under side, and in order, like soldiers each leaf being wholly eaten before another is attacked. This insect is the American process, or procession moth, Proeris Americana Harris, It is a small moth, and usually is not seriously injurious in vineyards. In the small quantities in which it innually occurs, it is best destroyed by entting and lumning the leaves on which it appears. Should the insect become numerous, it would be well to apply pyrethrum powder or an emulsion of kerosene oil. It would be dangerous to apply Paris green or London purple at the season at which this pest appears.

AN EXCHANGE, which devotes considerable time and labor to the completion of erop statistics, has computed the value of California products, for 1889, at the magnificent totals of \$350,000,000. The wine crop is estimated at 30,000,000 gallens, worth, when fully prepared for the market, at least ten millions of dollars. The new invention, that of ageing wines by electrity, will, it is further claimed, give this State an important advantage. The fruit crop is valued at eighteen millions. These flattering prospects are based upon the abundant rains that have fallen during the past two

AT THE Berlin exhibition of Portuguese wines, 150 casks and 2000 boxes have arrived from the Deuro; the dessert wines. especially the Muscatels, are pronounced magnificent; the German palate does not take to the table wines so easily, being accustomed to Bordeaux. What have struck the Germans most are the long macks of Portuguese white wine bottles. These seem to meet with universal approbation because they are so handy in pouring out wine across the table. Some of the table wines are found suitable, others too fiery. The task of the jury is not going to be an easy one, there being 1000 different sorts represented by 60,000 bottles.

Some extensive tracts of land in various parts of the State, have been donated to the State Board of Forestry, on condition that stations for experimental purposes shall be established by the Board through out the State. It is probable that the Board will at once cuter upon the desired work, and a number of plants, shrubs, etc., are now ready for transplantation.

THE PLORIDA Grange crop is estimated at 3,000,000 boxes, more than double the product of any previous year. Each box holds on an average 450 oranges, which will be a ton for every person in the United States. duction, the St. Louis Clobe Democrat says this is true of California as well as Florida, The enormous consumption of oranges is tallied by the equally increased consumption of grapes and berries,

THE NUMBER of inquiries which have come to us from the East and alread concerning the Frazier process, since the pullication of a descriptive article in The MERCHANT, show to good advantage the value of the paper as an advertising medium. THE MERCHANT is read by vinc-growers and wine-makers in all parts of the world, and its rapidly-increasing circulation is the most satisfactory proof that its efforts, on behalf of the viticultural industry of Califormia, are fully appreciated.

THE DUTY on Italian wines in France is 20 francs per hectolitre. In order to enable Italian Wine Merchants to export domestic wines to that country, the Government allows them a drawback of 12,85 frames on all wines having an alcoholic strength of 159° and gets the railroads, to reduce the freights sufficiently to overcome the differ-

Julius Dressel, of Sonona, is back from his trip to Germany. When he went, he took samples of white wine with him, and, according to German experts, they are worth from 75 cents to \$1.25 a gallon, the latter, for ordinary Riesling. Resistant vines are not the favorites in Germany that they are in France,

A NEW DISEASE has broken out among the grapevines of Santa Ana and San Gabriel valleys of California, It is termed the sapsour, and the cause of it no one knows. The vines begin to wither and in a short time die. The disease is infectious and spreads very rapidly.

THE STATE Board of Horticulture is about to publish a valuable pamphlet on olives, which will be ready for distribution in a few days. It is compiled by Secretary Long, and is finely illustrated with woodcuts. It is the first treatise on olives ever published by this department.

WHEN HAMBURG recently entered the Custom's Union, it was found that there were in that city not less than 110 wholesale wine merchants, without counting the Spanish and Hungarian bodegas, showing an increase in their number of 40 per cent. the last three years.

11. W. CRABB, for the producers; I. Landsberger, for the brokers, and Arpad Haraszthy, for the dealers, are now engaged in perfecting the details of the disposal of wine in the new Exchange.

Mr. Parrott has 5000 clive trees set out on his place in Napa county. In a few years he will have one of the handsomest and most valuable homes to be found in

THE GRAPE Season is not over yet in California. In the neighborhood of Silma green grapes can stilt be found on the vines, and another crop is expected after the New Year,

KATE CIELD'S MISSION

Kite Field, who is "preaching the gospe of the grape" in the East, has sent a letterl to the Viticultural Commissioners, in which she says that she will probably lecture before the Nineteenth Century Club, of New York, if arrangements can be made. Before she applied, the club's list of lecturers was full, but it is believed that provision can be made for her,

She has had quite good success in advancing the use of wine as a substitute for distilled liquors. The various prohibition editors have addressed questions to her for replies, which they will get. One of the most favorable letters yet received is that of Howard Crosby, a New York preacher. It is as follows:

> 116 East Nineteenth Street,) New York, Dec. 9, 1888.

DEAR MISS FIELD:-I believe the cultivation of the grape and the manufacture of pure native wine in our country would prove the best practical measure toward true temperance. The principal reason why temperance measures have failed with us is that the common sense and common conscience will not allow the indiscriminate condemnation of all drinks that contain alcohol. The distinction that actually exists between fermented and distilled liquors must be regarded in all temperance measures that will prove successful. If cheap native wines could take the place of distilled liquor as a beverage, the cause of temperance would mark its greatest advance. I trust the day will come when this will be achieved.

Yours, very truly,

HOWARD CROSEY.

THE NEW VINE DISEASE,

EDITOR MERCHANT: The grape-root discase in some Los Angeles vineyards is called the grape-root mold in Europe.

It is no doubt a sap disease or caused by diseased sap. The roots and vines should be most carefully destroyed by fire. Its cause is not definitely known. The only cure known is the thorough uprooting of all infected vines, as well as a double circle of inaffected vines, to starve the disease, as the mold spores reach out through the ground for fresh nonrishment (The mold is generated between the two barks.) A term of six to eight years is requisite to accomplish this. Yours,

M. Denicre

Frisno, December 13, 1888.

A NEW SEEDLESS GRAPE, -- An Eastern viticultural paper reports the propagating of a new seedless grape, by a Sutter county grape-grower, and is declared to be superior to the seedless Sultana or any other seedless variety cultivated in California. William Thompson, of Sutter county, originated the variety from the fruit of some cuttings he obtained from a nursery in Syraeuse, N. Y., and from some comparatively young vines a yield of sixty pounds each has been obtained. The grape has been named the Thompson Seedless,

An Eastern Exchange says, the commissioner of agriculture at Washington, D. C., is now purchasing cocoons of the crop of 1888. Persons having any for sale should communicate with him at once and obtain a circular relating to the terms of purchase. If you have not yet applied for silk worm eggs for 1889, do so at once so that your application may not arrive too

GRAFFING TO MISCATS

EDITOR MERCHANT .- I was much pheased gleaned a great deal of valuable informsespecially valuable to the beginner, because they contain a discription of the experience of many, in different sections from which one can draw his own conclusions.

I had intended grafting many of my vines to more desirable varieties next spring, and previous to seeing the article. anticipated the job with many misgivings, now, however, I feel assured of success, To the end that some one may gain a point or two I will give a little of my experience. Owing to the position of our section Colfax being the most casterly point in Culifornia at which graps can be raised and immediately on the line of the C. P. R. R., which gives us direct communication with the markets of the Lastern States, the most of as have planted our dineyards to Table Grapes and so far see to reason to regret it, though had we known more would have left out many of he varieties we planted.

An analysis of prices for California Grapes in the Eastern market during the past season demonstrates the fact that the hipping qualities of a Grape are of the irst importance. Next its appearance, chich includes -ize and color. Flavor omes third and seems to be of the least mportance, though I think this may possioly change in the future.

The Grape that seems to combine these onditions to the greatest extent so far is he Flame Tokay which in this locality hough ripening a little late is finer colored, nd more beautiful, than in any other part f the State, if I may except those grown a the Santa Cruz Mountains. It is also ery prolific though subject to sun-burn hich I think may be avoided by summer rnning, Without doubt this Grape deerves the first place among Table Grapes. The next to claim attention is the Puride amasens, called by some Blue Malvoise, nt there are some here, who claim that ie Black Ferrarra, Black Morrocco or ornichen should take second place and it ill take a couple of seasons to fully deteraine the fact, they are all excellent shipers and the Black Morrocco grows to an normous size of berry but not large inches which, however, is not detrimental, eing easier packed

The Muscat comes third though many ould give it first place. This Grape does ot set as well as in the valley but the tvor is said to be superior, certainly it ems to contain within its skin all that is be desired,

The Emperor which has a good record in e valley has fruited with me during the st two seasons but has not come up to y expectations -it grows very rank but is shy bearer and ripens so late that the ins are likely to catch it, but they are so m that notwithstanding the many heavy ins we have had lately there are many t they are rather insiped.

The Rose de Peru, Chasselas, Black rementioned. A considerable acreage committee of one to continue the investiga- the well.

of Wine teripos has been set out and it is from of the disc. ntled "Grafting to Museats,". From it, I feet), at all events the vine does well and ment should send on their expert at one tion, and have no doubt many others did a could crop of grapes, and in the near the winter. the same. It is just such articles that are future the wine will speak for itself since. On motion of Mr. krass the charlest W. G. Hirmann,

Cofes ta . December ! 1888.

THE WINE-GROWERS,

the Regular Semi annual Meeting of State Viticultural Commissioners

The regular semi-annual meeting of the Board of State Viticultural Commissioners was hold during the work.

A communication was received from Miss K at Field stating that she would detail the plans as determined of a liver her first public lecture in N w York, and that the expens s of the same would be about \$500. On motion of Mr. Doyle, Miss field was authorized to expend an amount not to exceed \$500 in the necessary expenses of a public lecture, to be delivered in the city of New York, in advocacy of the use of California wine.

Miss Field also wrote that she has ree ntly introduced Miss Mary Anderson to sound California claret, and that the charming actress was delighted to find that her a dry. State produced so executent and pure a beverage. She also inclosed letters from many noted persons in the Last to show that her work for this commission was well received.

In reference to the disease which is devastating the vineyards of Southern Califorms, Mr. Shorb stated that Mr. Dowlen, the expert appointed by this commission to investigate this disease, was working very hard and was studying the whole discusfrom a scientific standpoint, but that up to the present time he had not discovered the true cause of the disease, but he was positive that it was not caused by any insect.

Mr. Shorb further stated that thousands of acres were being destroyed by this disease, and if it was not checked that all of the vineyards of the south were doomed. He also was of the opinion that the same disease had appeared in the northern part of the State, and advised the other Commissioners to be on the outbook for it. He also thought that the commission should use every means in its power to find out the cause of the disease, and if possible to check it. He further stated that he had written a letter to Hon, Norman J. Colman, Commissioner of Agriculture at Washing. ton, asking the assistance of his depart ment in the erection of a conservatory, where the disease could be studied during the winter; and also that he send an expert to work in conjunction with the expert employed by this commission. In answer to this letter, Mr. Colman stated that the department could not furnish any money for building the conservatory, but that next spring he would soud out an expert to assist the commission in its work. Mr. Shorb stated that through instructions from the Executive Committee of this commission bunches on the vines at present writ- he had built a small conservatory, where g but their appearance belies their taste the temperature could be regulated so that the green blaves could be forced out on the vines and the disease studied during the amburg, Pineaux, all deserve a place but winter. The commission then indersed the

1.1 mile I di tata the expectation of those interested that a other with the D partic of Agriculture at superior wine can be made from the Zin- Washington, stating the importance of the with the late article in your columns, en- faided grape grown at this altitude (2126 work, and, if possible, that the Topartfully ripens a very sweet and palatable so that the work can be carried on during

> considerable was manufactured this season, tive officer was instructed to proper a curcular describing the discusse and to soud it out at once to all the vin yardists of the State, with the request that they keep a lookout for the discusse and to report it to this office whom discover at

The Commissioners then took up the subject of the perman ntechnist in Platt's Hill, and after considerable discussion, the Son letails outlined in the circular sent out by the secretary were adopted, and on motical of Mr. Shorb, the societary was made general manager, and the sofficers and Taxontive Committee were instructed to carry out

Mr. Krug then moved that a special Committee on L gislation by appendix h Fatta Powdered, 7 to Dry Granulated, and the president appendix to another community. mittee Messrs, Doyle, Manley, and West,

the last meeting of the local it was decided | 250 1 gall time, 150 per gallon, that the commission gather together represontative samples of wines and branches and send them as a State collection to the Paris Exposition, and he would therefore now instruct the Commission is to solvet such samples from their districts and to Dry Granulated, 7c; Confectioners' Cirsend them to this office before the 1st of January, so that the secretary can preparthem for shipment.

Chief Executive Officer Where reported that he was making solections of dried Zinfundel and other wine grapes for the pur-100s of sending them to Pairs and Bordeaux in order to ascertain their value for wine-making purposes, and also to find our what sort of a market there would be for large quantities of them. While on this subject Dr. Manlove stat dathat some dried graps a in his district had sold as high as 31, cents per pound, by the carload, that the Chasselus and Burger mid very fine dried grapes, and that the Zinfandel was one of the easiest to dry.

Mr. King reported that he was gathering statistics in his district and would soon lo able to hand in Lis report for 1888.

The meeting then adjourned.

KEEPING GRAPPS, - Th. Lat. E. P. Roy kept Catawba, Isabella, Drama and Jona by picking on a char day, using grapseissors so as not to handle much, removing all imperfect berries and place, an clean, dry earthern jurs, in layers a bunch deep, and filling the jurs in this way. Place a double short of pup rever the top layer, and put on the lid. Strong, unblenched muslim is pasted entirely over the lid or cover of the jury when the covering has fully dried and heard in d, the jars an burnel on a dry knott, beyond the action of the frost, a stake being placed ever each jar to locate it hecurately

CHEORALE of potash de solve fundrinking water is good for roup. Cayonic pepper, and lite for many kinds of poison, and is sulphur and meal mixed in the propertion valually in spasmolic asthma, whooping of I, 2 and 20 also make a good including englic helera infantino, and Asiatic cholfor roup. All the peppers have curative error lit is also excellent as a preventive properties. Danquess (2) at few of flowis against infections and epidemic diseases. and usually causes the lise as a known by a In districts rife with malaria and fever, running from the nose, a foul breath and the druking of het collect before passing adeficient in the shipping quality though work done by Mr. Shorb, and on motion of a dark comb. In this, as in all other case and other case into the open air has enabled persons to flavor I think them ahead of the Mr. Doyle, Mr. Shorb was appointed a tagious diseases, remove the sick from living in such places to escape contagion.

WHOLESALE MARKEL.

For friege but to the whole s Inches a series

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sa bri corajas secinas, das

Sugar Quotations

t dif ann e Sugar R finery price list dated Dominical 20th, Circle A. Pat Cube, 71 ac. Circle A Crushed, 7 Sec. Fine Crushed, 72 sec. G. den C. 5⁴ ye. Star Drips Syrup. Prosident Wetmor, then stated that at in blds, 17%, o. hf do, 20%, 5-gall kegs,

Price list of the American Sugar Refinery dated December 20th Extra Fine Cube, in blils, 7 ger Circle A. Crushed, 75 ge, Fine Crushed, 75cc. Powdered, 7 se; Extra Fine Powdered, 700 c, Dry Granulated, XX 72, c, ch A, 67, c. Extra C, 77, c, Goldon C, 5, c. An riem Golden Syrup, in Ebbs, 20e per

LATEST LEPORTS from the San Francisco graps market show small offerings and light

COFFEE AND 118 LEFEUTS

Coffee owes its stimulating and refreshing qualities to caff inc. It also contains gum and sugar, fat, acids, caseine, and wood fibre. Like to a, it powerfully in-creases the respiration; but, milike it, does not affect its depth. By its use the rate of the pulse is increased and the action of the skin diminished. It lessens the amount of blood out to the organs of the body, distends the veins and contracts the capallaries, thus preventing waste of tissue. It is a mental stimulus of a high order, and one that is liable to great abuse. Carried to excess, it produces abnormal wakefuln ss, indig stion, acidity, heartburn, tremors, debility, irritability of temper, trembling, irregular pulse, a kind of inte-vication ending in delirium and great injury to the spinal functions. Unfortun dely, there are many coffee tipplers who depend upon it as a drunkard upon his dram. On the other hand, offee is a sovcream efficacy in teling over the nervous system in emergencies. Coffic is also, in its place, an excellent medicine. In typhord fever its action is frequently prompt and decisive. It is indicated in the early ste s before local complications arise. t , the dispole $\exp(i\tau)$ and bethargy, is an Ex

OUR NATIVE WINE SHIPMENTS BY SEA.

OUR NATIV				IA
PER P. M. S. S		ER ACAPULCO, DEC. 3	, 1888.	
	TO NEV	V YORK.		
MARKS.	SHIPPERS	PACKAGES AND CONTENTS	GALLONS	VALL B
	Kohler & Frohling	5-1 barrels Wine	2,727	\$1,63
X F	Carpy & Co	3 casks Wine	322 350	32: 150
JL	A Brun & Co	1 half punction Wine	60 300	50 150
in diamend	Gachman & Jacobs.	15 barrels Wine	756 3,450	$\frac{250}{1,47}$
Bros	S Lachman & Co L Regenslerger	7 harrels Wine	356 148	166
R & Co	Overtand Transfer Co			
1 B		5 barrels Wine	1,197	501
V Co	t* Schilling & Co	121 barrels Wine	5,660	2,20
Total amount of Wine.			15,326,	86,588
	TO CENTRA	L AMERICA.		
	Bloom, Baruch & Co	G barrels Wine	311	8210
N J' Cormto		1 case Wine 2 half-barrels Wine	5.4	4
&, Corinto	John T Wright.	411 mount Warre		16 10
3 M B, Corinto			382	53
Total amount of Wine,		EXICO,	3621	
			10	3 :
O C, Mazatlan	W Loaiza	1 keg Wine	61	[*] 3
Total amount of Wine.			71	8-1
	TO PA	NAMA.		
D & Co	Sperry & Co	2 cases Wine		8
L & Co		2 cases Wine		
Total amount of Wine,	4 cases and			\$1
TO	HONOLULUP	ER STEAMER AUSTRALIA.		
с г	B Dreyfus & Co	11 half barrels Wine)	1	
**	ts .	40 kegs Wine	873	\$67
e. E.		1 case Wine	45	10
W M & Co	Kohler & Van Bergen	75 kegs Wine	247 375	18 33
0	**	85 kegs Wine	852	70 6
in diamond H & E	Eisen Vinegar Co J Gundlach & Co	35 kegs Wine	125 63	11
LS	**	5 cases Wine	394	29
61	11	45 kegs Wine 25 kegs Wine	225 250	18 19
	. C Schilling & Co	6 cases Wine	121	2
A S Co	. C Schilling & Co	2 barrels Wine	66	18
& Co	Lachman & Jacobi	. 7 casks Wine	609	10
0		5 barrels Wine		56
in diamond		, 25 kegs Wine	125	20
	52 eaves and			\$3,95
	YORK-PER Shir			
B & J	. Lachman & Jacobi	. 32 barrels Wine	48,075	\$19,23
G		25 barrels Wine		
M W & B	Downing & Schmidt	25 barrels Wine)	5,941 4,641	$\frac{2,37}{1,85}$
t in diamond	. B Dreylus & Co	100 barrels Wine. 250 barrels Wine.	22,562	9,02
3 D & Co		125 barrels Wine	6,200	2,48
3B in diamond	- Konier & Van Bergen	50 barrels Wine	23,703	9,48
1	, J Gundlach & Co	. 629 barrels Wine	31,866 9,406 27,230	$\frac{12,74}{3,76}$
	. S Lachman & Co	1349 Garrels Wille	27,230	10,89
			179624	\$71.81
WINE REPORT P 1	VI. S. S CO'S S	TEAMER CRANADA, D	EC. 13,	1888
V Co		. 100 barrels Winc	4,866	81,28
B in diamond	. Lachman & Jacobi	5 octaves Wine	$\frac{1,271}{2,536}$	4:
3 B	. B Dreyfus & Co	25 barrels Wine 50 barrels Wine 25 barrels Wine 10 l case Wine	1,231	6
		o.pr case with control of the case with contro		\$3,1
Total amount of wine		AL AMERICA,	0,003	4.5,1
' S. Corinto		and the same of th	20.	- · · · · · · · · · · · · · · · · · · ·
Z, Oces	Eug de Sabla & Co	1 keg Wine 8 kegs Wine		1
A, Oces		1 cases Wine		10
d C Champerico	Urrela & Ericoto	1 keg Wine 3 kegs Wine	30	10
				į
1 P CO, , ,	D Diejius & Co	12 cases Wine	652	4
A S & C		30 cases Wine	100	1:
A 2 & C. Champerico	Kullman, Saiz & Co.	. 5 cases Wine		
I & Champerino	Schwartz Bros	70 eases Wine	831	53 30
C H. San Juan del Sur	Horace Davis & Co	2 half-barrels Wine	53	:
R M, La Libertad. N N, Amapala.	John F Wright	26 kegs Wine	312	2
H U C P C, San Juan del Sur	. Napa Valley Wine C	o. 3 kegs Wine 6 kegs Wine	30	4
G F C, San Juan der Sut	"	4 cases Wine		
	. 188 cases and		2.215	\$2.3

	_			
	TO M	EXICO,		
T II, San Blas V C, San Blas II S, Mazatlan A B C, San Benito. A F M, San Benito. A F M, San Blas D C, San Blas L A, Salmas Cruz.	Laker & Hamilton W Loaiza Reddington & Co. Thannhauser & Co.	2 kegs Wine	118 47 156 48 10	67 31 160 8 32 1 9 1 14 380
Total amount of	Wine, 50 cases and		480	8725
	TO P.	ANAMA.		
F A	E Kemen & Co J Gundlach & Co	2 cases Wine. 10 barrels Wine. 30 kegs Wine.	500 300 50	6 200 200 1 255 1 15
Total amount of	MISCELLANEO	I'S SHIPMENTS.	885	\$500
DESTINATION	VESSEL	RIG	OALLONS	ALUB.
Ka'urtin	Tahiti Degame Marion Anna		1,005 301 60 629 28 30	\$256 135 36 487 20 24
Total			2,053	8982
		29,26 186,1s		14,233 76,786
Grand totals		215.30	97 8	91 019

FANCHER CREEK NURSERY,

OFFERS AN IMMENSE STOCK OF

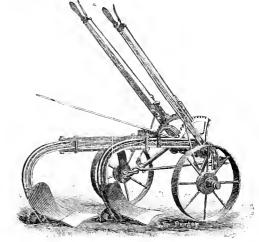
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Have Heavier Beams and Made Stronger Throughout, Than Heretofore,

The Only Steel Beam Gang Walking Plows which will not Clog in Heavy Stubble or Weedy Land.

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Light draft, strong and durable.—M. Murray, Livermore Has given entire satisfaction.—E. H. Farmer, Gilroy. Superior to them all.—A. J. Huff, San Lucas. Easily managed, strong and durable.—H. Carpenter, Suisun.

For further information, prices, etc., write to

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Total amount of Wine, 188 cases and 2,215 \$2,313 SAN FRANCISCO - - SACRAMENTO

OLIVE RANCH OF 448 ACRES.

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For particulars apply to

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Niles, Alameda County, Cal.

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Largest and Cheapest Cash Grocers on the Pacific Coast.

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IN CREEN AND DRIED FRUITS, NUTS, Etc.

DESICCATED COCOANUT, Mandatacturics (very day). Ask your Grocer for Pioneer brand. It is the best and choopest in the world. Medds awarded in all Ears where exhibited.

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	CAPITAL.	ASSEIS.
JANUARY 4, 1875	 300,000	\$ 747,455 45
JANUARY I, 1880	 750,000	1,160,017-00
JANUARY 1, 1888	1,000,000	2,151,925 15

Losses Paid in Twenfy-five Years, \$7,500,000,00.

WM J. BUTTON, Sceretary, D. J. STAPLES, President, ALPHEUS BULL, Vice-Presiden, B. PAYMONVILLE, Asst. Secretary.

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Kingsford's Oswego Starch, Sopher and Squirrel Exterminator Walter Baker & Co's Chocolates and Cocoa John Dwight & Co's Soda.

We will offer a full line of other Grocers' articles shortly.

300,000 FRUIT TREES.

We offer for the season of 1888-89 a large and very emplete assortment of FRUIT TREES grown absolutely without irrigation.

Also Ormanicutal and Shiels Trees, Nut Trees, Orange and Lee in Trees, Small Frants, Grape Vanc Evergreens, Hedge Plants, Slatters, Roses, Baltis, Sec. S. et-

LARGE STOCK OF OLIVE TREES, ALL SIZES, JAPANESE TREES AND SHRUBS IN GREAT VARIETY. Correspondence Respectinity Solicited

TRUMBULL & BEEBE,

419 421 Sansome Street,

CALIFORNIA

SUBSCRIBE FOR THE SAN FRANCISCO MERCHANT

SAN FRANCISCO.

MANURE IN THE VINLYARD.

The Southern t altirator says the fall and early winter is the best time to apply any coarse manures to a vineyard or orchard, but manures may be applied later in proportion to their solubility. Aslas have long been esteemed as one of the best mannes for grape vines, because ashes contain himand potash, both of which abound in the ash of the vine. Ashes should not be up phoduntil about the time the vine shartinto growth in the early spring, and they may be scattered on the surface and grad nally worked in during the cultivation of the crop. But lime is not especially important unless the soil as known to be unusually deficient in this chanont, as most clay soils or fresh soils of any character contain an abundance. Moreover, ashes contain even more lime than potash. If the ashes are unbleached and dry, fifty bushels would be a liberal application per acre broadcasted. It would be improper to apply the strong, unbleached ushes immediately around the vines. Leached ashes may be safely applied in almost any quantity.

To insure that the vines will grow off speedily, prepare the ground by deep plowing, or spading, turning under a good coating of well-rotted stable manure. Secure well-rooted vines of one or two years old: cut off the long and all braised roots; dig holes large enough and deep enough to take in the entire root system, fill in at the bottom with rich top soil and rotted manure cut the vines back to two eyes, which should be just at the surface of the ground when planted; press the soil around the stem. When the two eyes have put forth canes and the latter have grown several inches, rob off the weaker and train the remaining one to a stake. Cultivate the surface frequently and mulch at the beginning of hot weather. Bones may be broken into coarse pieces and a peck scattered around each vine and forked in. They will become slowly available and last many years. Fine bone dust may be used if more immediate results are d sired, sprinkling the same over the surface at the rate of two or three pounds to each vine and in a circle of three feet in diameter.

THE POMEGRANATE.

A correspondent of the Elsinore News says: The pomegranate is known here in California as an ornamental shrub, bearing a beantiful fruit. In Mexico it is called the granada. There they cultivate it extensively and fully appreciate it: it is also regarded as a valuable medicinal plant. It can hardly be called a tree, yet in damp soils, suitable to its growth, it reaches to the height of fifteen or twenty feet. Here in California it has not been grown very much, or even received merited consideration. Some time ago, however, Governor Downey wrote quite an article speaking of its merits and how its medicinal qualities had received the recognition of Lundon and Edinburgh colleges. Since then it has steadily grown in favor and is being raised and deciding to make California raisins in some parts for market. You see it at many of the oldest Missions, planted many years ago, growing without any care or respect, and clinging to life, and reminding one of those old days gone by when it stood at the head of the ranks, and was so much thought of and prized by those kind Mission Fathers. People are now beginbeauty and loveliness. On a hot day there sidered, is against us, I expect to sell this The season lasts about three weeks.

is nothing so charmingly delicious as a saucer of pomegranate seed sprinkled over with sugar -it is so cooling and refreshing and an agreeable febrifuge. It is quite handy, and when growing, either in the hedge or orchard, it is very pleasing to the eye. It is easy of propagating from seeds or cuttings the latt r the easiest. Plant it eight or ten feet apart, orchard form, or ven in a hedge the same as Osage oranges, and will do well most anywhere. I believe it belongs to the family of myitle, but c rtainly is ahead, as the fruit is most valuable: will keep almost forever, and stands any amount of transportation; comes into the market as fresh fruit during the winter. and in a few years there must be a great demand for them in the East where the truit cannot be grown. Already, some of the Northern murserymen are taking the hint, and it will not be long before we see in their catalogues several kinds of the pomegranate. It is one of the oldest fruits brought out into new life; and no wonder, for whether in foliage, or flower or fruit, it is a beauty.

EXPLOSION IN A WINERY.

The bonded distillery connected with the Los Gatos Co-operative wincry was destroyed by fire To sday night together with a large quantity of brandy, About 9 o'clock Herman Rotcher was at work distilling brandy and was making use of a lamp. In passing close to a still, the vapor was ignited by the blaze from the lamp and an explosion took place, the burning oil being scattered in all directions. Rotcher was hadly purned about the face and hands, and with difficulty managed to make his escape. The noise of the explosion was heard by the foreman who rushed down stairs and blew the whistle, and in a short time the fire company and a large number of citizens were at the scene endeavoring to stay the progress of the flames. The fire, owing to the large quantity of spirits in the building, spread with great rapidity and all efforts to save any portion of the building were futile. The winery which adjoins the distillery was in danger of being destroyed, but, owing to the good work of the firemen, damage to it was prevented. The power machinery of the winery was located in the distillery and was destroyed, as was the building and its contents. The exact amount of the loss could not be ascertained owing to the fact that W. B. Rapkin the manager is out of town, but it is estimated that the loss will not fall short of \$6,000. It is partly covered by insurance.

CALIFORNIA AHEAD AGAIN.

The American Grover says it can no longer be charged that California raisins have not the "bloom" that characterizes Malaga raisins. The flavor is excellent. The packers of California deserve great praise for the persistent manner in which they have fought to place their product alongside of Malaga fruit, and having reached that point, for taking fresh courage grade above like marks of Malaga. And this year's product shows that they have done that. We requested one of the oldest, most experienced and largest handlers of the three-crown loose California raisins before us. He said: "They are extra goods,

year more California raisins than I do those of Mulaga," Well done, California! You are fast driving the raisin-growers of Spain out of the American market, having already forced them to diminish shipments and turn more of their grapes into wine. Every time American rejoices over every new industry planted on this side of the water, and none has a more creditable history than that of the California industry

MOSS ON FRUIT TREES.

J. H. Hale, of Connecticut, an experineed and successful orchardist, writes to the American Apriculturists

" Moss is found most often on near trees not in a vigorous, growing condition, or in moist, shady places. The moss is a sort of fungus growth, which is easily kept off by washing the trees with strong soap sads. This treatment promotes the growth of smooth and healthy bark. If the trees are hadly mossed over now it will be best to take an old how and scrape off the thickest of the moss before washing the trees and then wash them two or three times during the next two months. In the fall, after the leaves are off, spray the whole tree with the soap suds, repeating this early in the spring. At Elm fruit farm we make a borer wash for our peach and other trees, and it also answers the double purpose of keeping out the borer and keeping the bark clean and healthy. This wash is prepared by adding to a common bucketful of water two quarts of strong soft soap, half a punt of crude carbolic acid, two ounces of paris green, with lime enough to make thin paste that will adhere to the tree. If convenient, a little clay or fresh cow dung may be added to assist in making the wash stick. Apply it with a swab or brush about the base of the tree and in the crotches of the main branches. The rains will wash it down from time to time, and the whole trunk will receive the benefit. In spraying the trees when not in leaf, I usually add a quarter of a pound or more of potash to each bucketful of soap-suds, so as to make quite a strong lye. These washes cost but little and are of great value in the orchard.

THE DEWBERRY.

L. N. Stone of Iown, in a paper read be fore the last meeting of the American Horticultural Society, said that this berry is soon to occupy a prominent place in the list of small fruits cultivated in this country. There are two kinds-one that propagates by the tips and another by suckers. CUT WORMS AND GRAPE VINES. The former is the best for general cultivation, as it can be kept within bounds very easily. It has a more sprightly flavor than the blackborry, and its larger size, attractive appearance and the fact that it ripeus before the blackberry, will make it a profit able market fruit.

It stands drought better than any other small fruit, and its trailing habit makes it easily covered in winter in the far Northern latitudes where protection is needed. Set out the tips in early spring, three and onehalf feet apart, and cultivate the first year, Cut the canes back to two feet when they have attained a length of two and one-half to three feet. Bartle's Mammoth and raisins in the market to give his opinion of Lucretia, both tip varieties, are excellent, the former being preferred. The yield is about the same as that of the blackberry, and equal to four-crown Malaga fruit, Under favorable conditions one hundred ning to value this lovely shrub for its Although the market, geographically con- bushels per acre are not excessive yields, it is evident that this estimate falls far

WORTH TESTING

A French fruit-grower says: The trees of my peach orchard were covered with insects when just commencing to bud, Having cut some tomatoes, the idea occurred to me that, by placing some of the leaves around the trunk and branches of the peach trees, 1 might preserve them from the rays of the sun, which are very powerful. My surprise was great upon the following day to find the trees entirely free from their enemies, not one remaining, except here and there where a curled leaf prevented the tomato from exercising its influence. These leaves I carefully unrolled, placing upon them fresh ones from the tomato vine, with the result of banishing the last insect, and enabling the tree to grow with luxuriance. Wishing to carry still further my experiment, I steeped in water some leaves of the tomato, and sprinkled with this infusion other plantsroses and oranges. In two days these were also free from the innumerable insects which covered them.

LEMONS

Lemous are among the most popular and widely consumed tropical fruits of the world. In a week's time during the warm season of the year, there are used in the United States alone about 100,000 boxes, Each box contains from 300 to 360 lemons. New York is the distributing point. They range in prices according to temperature. Oftentimes the prices of lemons vary even more than the fluctuations of the wheat

" Nearly all that are sold in the United States, Germany, Russia, France, England, and the English colonies are raised on the island of Sicily. The whole business of the island is confined to the raising and exportation of lemons and oranges. Sicilians ship to this country alone nearly 5,000,000 boxes a year. There are more used for medicinal purposes to-day than ever before, and there is nothing better when you are thirsty or feverish than a bite of a lemon."

Very few are raised in this country. Some are grown in California and Florida. San Francisco uses more lemons raised in Sicily than California. The same thing may be said of Jacksonville. The home product amounts to very little when compared with the demand. Both States, however, have been able to crowd out Sicily oranges.—Ex.

It is reported that during the past season there was considerable complaint regarding the injury to grapevines by cut-worms. They made their first appearance about the time the vines began to put forth their buds. A correspondent from Eric county, Ohio, has discovered that the larvæ, or caterpillar of "Agrotis cupida" - a climbing cut-worm-is very destructive to the buds of grapevines in this locality. According to this correspondent, six or eight persons bearing lauterns examined the vines each night during the continuance of the caterpillar, and 2,000 caterpillars were collected and destroyed. It was calculated on the basis of one caterpillar eating a single fruit bud each night, that the buds thus destroyed by the caterpillars would have produced at least eight tons of grapes, but short of the mark — Ex.

THE APPLE CROP.

Reports received from sixty-seven districts in the United Kingdom indicate that the English apple crop is a partial failure as regards extent, while the quantity is below the average in forty-six out of the sixty-seven districts. Trade circulars differ as to the Continental crop, some stating that it is likely to be foth tings and good, while others report that the prospects in Holland indicate only about on third of a fair average crep. In Belgium, early apples promise well, but there are indications of a small crop of late apples. A short crop in France is also reported on account of the very wet weather. According to the D partment of Agriculture, the Atlantic States to Virginia give promise in the aggregate, of a medium crop, though the condition is very low in New Jersey, and not over three-fourths of an average erop is likely to be obtained in New York. With the exception of Rhod Island, Conneticut, New York and New Jersey, the condition is better than last year. In Virginia the prospect is the poorest for years. Arkansas and T massee will probably have good crops, while in Kentucky and the Ohio Valley the prospects are good for a fair crop. The trans-Mississippi States are likely to have medium crops, though there are complaints of poor quality, seab and blight in parts of Missouri. The prespects of crops on the Pacific Coast are consplicably above the

BOGES CHAMPAGNES

Our generally consenutions in ighbot, the Mail and Express, allowed its editored columns to be utilized recently for advertising the making of an artificial champagne by a man in Germany, where desirous of securing the services of an agent in the United States. The estensible reason for publishing the communication was that it described a new and useful invention. The idea, however, is not new, and so far from being useful that the somer the law stops the nefarious business of sophisticating wines the better it will be for the health of our community, for the causes of temperatice, and for the homest wine producers of the country. For many years several firms in this city have taken common cheap Rhine and California wines. reduced them with twice or three times their bulk of water, added spirits, tartarie acid, sugar and carbonic acid gas, and then, under various fancy labels, and sometimes with andleious forgeries, have forsted this trash upon the market to be sold by unscrupulous dealers for gonume chainpagnes. Even if such an imitation as the article described e add be made, it opens a wide door for all kinds of fraud and deception. This country can and does produce genur e champagne of as good quality as that which is imported. We need no mitations, - American Analyst,

THE CAMPHOR TREE

Why do we continue to depend on certain parts of the world for our supply of what have become necessities, enquires the Merchants and Managacturers' Journa , Some of them are vegetable products that, with due care, ought to be naturalized on some part of our Continent, in which there is every variety of soil and climate. Why cannot the camphor tree be grown ?

The tree is of the laurel family, and grows in China, Japan and several of the the best.

East India countries. It is a tree of considerable size, straight, towering, elegant The leaves are oval, inclining to the Lines, head shape, as they are pented at each end. They are glossy and leathery, smalling of camphor strongly whom rubbed in the hand. The blossoms of the tree ure very small; the first is a being about the size of a pea, of a deep juride color when tipe. The campbor does not exact from the tree, even when the back is cut, but is found in littl. banches in the pores of the wood. To obtain it, the trunk, be a closand even the roots, are cut into small bits and distilled. The camphor, volatilized by the heat, deposits on the cover of the x-s sel as it couls, and, to remove it easily, the inside of the cover is lined, with a matting of rice straw. The crude camphor is exported, and in Europe and this country prepared for the market in the form under which we know it

The preparation of campher originated with the Venetians, and was palously guarded, but the Datch in time obtained the secret, and succeeds d to an almost complete meropoly of the trade. The wood of the tree is used for trunks and boxes, in which to preserv valuable v stments and garments, as the powerful oder repels most

HORTICI LTTERE IS ONTO

The horticulture interest in Ohio is as old as any in the State. From the first settlement in Mirietta in 1788, when a few fruits were planted, to the present year, who u was shown at the Ohio Contemnial at Columbus the largest and finest display of apples, pours, peach's and grapes (and, perhaps, of plants and flowers, also, i ver seen in America, there has been one continuous triumphal merch. An account of this progress and of the achievements in the art of hornculture is being published under the title of a " Centennial History of Ohio Horticulture" in the journal of the Columbus Horticultural Society, puls lished monthly at the low rate of 50 cents vycar. The \hat{J}_{COP} al contains, in addition to the above, many valuable and original papers, by eminent hortrenhurists, book reviews, select notes on horticultural ropies, te. S ad 50 cents now and get the Horticultural History, written by horticulturists in all parts of the State.

WINE IN ARIZONA

It has been demonstrated, says the Phot mix Gazette, many times that the salt river vall y can produce the finest wine grapes in America, and every trial in wine-making has been crowned with phenomenal success, J. R. Moss of Mesa City cultivated ton acres of Mission grapes the past season from which he sold 23,000 pounds of grapes, dried 16,000 pounds and made into wine 20,000 giving in return 1100 gallons of time white wine, or 110 gallons to the ton.

Thus it will be seen what can be nocomplished on a ten-acre tarm. Mr. Mors. tells us that through neglect he lost sever d tons of grapes, as they grew in such profusion it was almost impossible to care for them all. He estimates his yield at four and one-half tons to the acre,

The gentleman presented us with a sample of his wine, and while we do not claim to be expert on wines, yet it was easily to be seen that it was a very superior quality, and with age would be expect to thirty days, equal to three year's maturing utoler th

THE Philadelphia Motion No. 1 mitan important address delivered before the American Climatological Association in its late meeting, by Dr. Looners of New York City, dealing with the novel question of the climate and environment bust sure to people who have passed the property The author shows that old not three hein moderately warm cherates, a force change of residues one entire raying a a necessity, while the Locality selected in a there an out of door in, with some in a lngs which stimulate to mental and physical activity. The englishers with importance of persons of advanced age of an abundance and variety of smode, partition of all and cooked food, the avoidance of the exten-tive business habits and exert ochreearlier life, and the utility of war lim baths,

THE PLEET OF BLAINS, A VEHILL WELL SE answorld an advertisement for a governess in Sydney, N. S. W., and this is the rapy she get. "In reply to yours I require a governess to teach Haglish music drawing French (beginners), callistle mes there are four pupils eldest H youngest 41, and two younger children with whom you would have little to do as there is a nurs . Your two younger pupils would require to be washed and dressed and the eldest to have her hair done. There would be a few light household duties, of which I could H. M. Newhall & Co. t II you should you consider the position likely to suit you. The salary is \$15 ep. r annum."

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Description of the Blueberry.

The Blueberry is a valuable fruit, and is a reliable fruit to grow in our northern states where the more tender varieties of fruits wint rekill. It is perfectly hardy, having stood 10 degrees below zero without she wing any rejury to the most tender buds. It is persisted to the state of the pass in that latitude about the 1st of July, and is borne in clusters like currants; shape, round, reddish purple at first, but becomes a bluish 19 ow her fully ripened. The flavor is equal to the raspberry, a very hadd, tich sub-and, prenounced by most people deheious. It may be served with sugar and cream or cocked same, and is speciald for winter use. The plants chaste flowers his and is a prolific bear. It grows very stocky and makes a nice hedge. The shimning dark grean leaves and the blue fruit making a pleasing contrast. It demandle is the fruit is great, and usually brings 15 cents per quart. They commence bearing the first year after setting out, and yields a full crop the second and third year after setting out, and very stocky, helding the fruit well up from the ground. Thants should be set in the fight and sping, in rows two or three feet apart and five or six feet between the rows, making a perfect hedge, and negress or we is should be allowed to grow between rows. The Blueberry is a valuable fruit, and is a reliable fruit to grow in our northern

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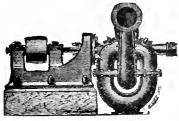
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FACIN ABOUT SOILS

The soil is a compound sub-tan- of mineral, vegetable and animal particles that form the upper stratum of the earth's surface. In selecting the sit for a farm, there are many things to be courselered in them announced the preventive virtues of addition to the character of the soil. Among these is the important one of location with regard to mark t familities, health, value in a way far by occurring. Him are good neighborhood and prospective ridso in value. Soils admit of many classificastituents. Rocks are the original basis of soils, having, by the long-continued old salts " agency of the forces of nature, by airtility. The pulverulent brown substants large veter-a strictly unanimous one, formed by the action of the air end and As a temp rary relief for sick headach animal or vegetable matter, is called it has a neitheral, value; but it is as insidhomas, and is a valuable constitution of lines as obtained as to violate solutions. soils. It renders stiff soils (right - As All these drugs have about the same biogdegree supplies the mineral clements of decayed matter in soluble forms for plant.

The capacity of a sandy loads for retaining moisture depends on the amount of her to their power who live, and a best of cayed vegetable matter which it contains graves. and without which it will be infert. Sandy and clay soils r pures different treatment. Eich will behehment by an admixture with the other, but the unit a of pure saud and clay alone will be sterile unless supplied with decomposed regetable matter. Under draining is highly ben field to clay soils. A sandy loan is visity worked and is among the most desirable of all the soils.

. TO TELL A MISHROOM

1 - It grows in oil pastures and meadows, always in the open fiel veluet in the woods.

2. -It is round and butt u-ship- I. in hke an umbrella, but in each instance there are pink "gills" like the rils of an time brells prolonged beneath. These gills torn dark brown when the mushroom is old.

3. The mushroom each boy ability stripping off the cover of an umbrelia starting at the edge.

4 Around the stem, where technis out of the ground, is a little pretub-rance, a ring slightly broken.

5. -A mushroom has a sweet appetizing smell, while the "toadstool" is almost ferid

... The mushroom is nearly smooth on top, while the toadstad, which is a stat it in appearance, is rough and warry on its surface

To cook these mushrooms, pool, clean and break into piczes, cov r with cr am or milk, or water and a little beater, let them cook a very short time. They should not boil more than two or three minutes, as they grow tough by cooking too long. So a son with a little butter, salt and popper, and at the last thicken the broth with a little cornstarch wet up in milker water. These are delicacies whether served on toast, as a sauce for chicken, or alone as a vegetable.

ANTIPYRINE IN SEASTIGENESS.

At a late meeting of the deet is of France at Marwilles, says the American Magazine, part of the programme was an excursion to Algiers, and lefor they sailed, one among anti-pyrine in sea-stekniess - "N w." said he, "there is an opportunity to test its a hundr d and fifty doct is of us going to s a, not one of whom is a sailor. Let us tions, arising from their different con- take the lrug, and cross the middle was like veterins and only our little trip like

Adopted. So every dector arms I himmoisture, frost and heat, born resolved self with capsules of anti-pyrine and began into minute particles, taking on the form betake them as the ship swing out of the of earth. Soils ar call disting gravilly. Lock and high lifer Africa; and in half an clayer, pears, etc., according as the sub-th or afterwards that seenty, with at exstances named constitute a leading feature organon, was full out. They stuck main in the compound. A learn is a soil chiefly fell'y to their mely, leterannel to give it composed of silicious sand, clay and other fair play, but while they haded in the mineral substances, along with a large per- morning, a living dout, dilay i lat delooking centage of decayed vegetable and animal set, the rote that anti-pyrine was a mis ramatter, to which it principally ow sats for- blood lists in in seasiful so, passed by a

sorbs and retains moisture, and in a large traphy. They exist in with trumpers and beat of drain, heridd I as also dute our allacapt all the maistra amongst the prople like a p - tilence, and gradually subside out of public sight, I avir at hind some victims

SAN FRAN IS 1184 J. NOS UNION 5/12 Cault mustrert, a met Av

First half sear ording with district December 1888, a considerable of a social center of the considerable ordinary ordinary of the carry of the carr

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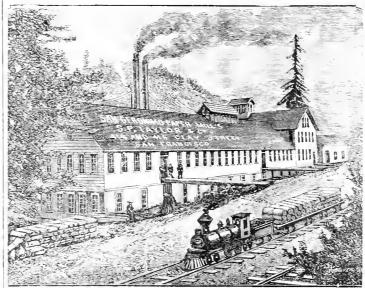
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VOL. XXI, NO 8.

SAN FRANCISCO, JANUARY 1, 1889.

PRICE 15 CENTS

THE VINE ROT.

NAESTIGATION INTO THE CAUSES OU THE LOS ANGELES PLAGIF.

weekly Reports of the Special Agent appainted by the Board of State Vittenferrat Commissioners.

Note -Through the courtesy of the Viticus with fungus growth, ural Commission, the Marchant is enabled n full, vine yardists in other portions of the respondence.

WEEKLY REPORT

The investigation during the past week ass been practically confin- I to the older parts of the vin yard, planted with the Mission grape. This part sooms to be a fair sample of the whole, and, in addition, occupies both high and low ground. It has been traversed in various directions so as to cover all parts.

The vines throughout show the same general characters and can be divided into two groups as follows

In this group the vines are either quite dead, or almost so, all the leaves having fallen off, leaving the baf stalks on the up. This group containing the remaining vines proved to be more or bess affected all. through, both in leaves and fruit, varying atself to form the warry excressness. Fi from a few leaves to more than half the vine.

The leaves have all fallen off leaving the leaf stalks on the branches. These leaf tempt to follow the fungus growth deeper stalks are completely dried up from eith r just at the point of union with the leaf from stalks which have died in the main, to sof the surface and had just begun their usually show on their upper surfaces is, of course, necessary, slightly raised, warty patches, red brown San Galeriel, Cal., October 1, 1888

did - have gray and but these often exhibit. solutions the older branches in which the bar's has taken on its brown of show abundance of small spets of fungus growth. The fruit lumches of all iges on thise vines, are usually quit shrivelled up, and have all the stalks dried. up in the same manner as the baf stalks, and these front stalks are usually covered

ments, which will naturally assist in chiefs far to that noticed on the fruit stalks, for them, lating many technical points in the cor- Some of the fruit bunches are quite spealed. spots of fungus similar to that noted above.

fructification. Considerable time has been growth of a small fangus, immediately untact with it, to become filled with a dark without success. brown deposit, and has caused the tissuunity the cuttele has been ruptured, and through this rupture the fungus has come to the outside. In this case also the atinto the tissues has not yet been successful Numerous tissues were observed on the blade to almost the entire length of the branches, in which the fungus spores had stalk, and present a different appearance lodged in some of the numerous irregulariral course of things. The green branches growth. Further examination of all these

PLAN OF INVESTIGATE S $I_-H,\ Wb. . S.,\ Fs_{t+}$

Deas Sing-I big to acknowledge yours of the 1st inst. I note your suggestions and firections and will act upon them,

With root, I am inclined to think that the trouble may arise from a discuse proper, possibly enabled trassert itself by a weakxe priousl character, but at present I am In this group the vines vary much in approximate keep from having a theory to proo present its readers with the full text of the pearance, some having a large proportion passe, until I have sufficient facts in hand eports much by Mr. Ethelbert Dowley, of the leaves and fruit withored, others to back up any opinion that may finally their agent appointed to investigate the having only a few leaves gone wrong, but he arrived at. At present I do not allow lisease now provident in Los Angeles vines in all cases the features are the same, myself to behave or disbelieve any one pards. As the reports are given sortistim and. The leaves look as though they had been ching in particular, as I wish to take every scorehed along the edges. The mischief thing that comes under my notice for pre-State are thereby placed in a position to has always begun at some point of the cisely what it is worth, and I shall be very readily settle the question for themselves, margin of the leaf, and has then spread in ghal to get all the ideas and suggestions whether or not the peculiarities mentioned, wards, the part affected has dried up, turned, that I can. By this time you will probably in connection with the different phases of brown, and curled in upon the upper sur- have received my reports which are made the disease, have been noted in their vines tace, and on almost every leaf examined, weekly to Mr. Shorb, who has furnished yards. Chof Viticultural Officer Wheeler numbering many hundreds, the dead portune with some of the reports you mentioned will shortly give an analysis of the degretion shows numerous spots of fungus similand if he has not the remainder I will write

With respect to the correspondence others only in part. The affected parts, which you advise me to cut r into, I am and sometimes even plump berries, show preparing a series of questions suggested as my work proceeds, which might possibly A interoscopic examination of the leaves be printed and sent to vine growers to be shows that on the decayed portion there is filled up by them and returned, and if this a plentiful growth of a minute fungue, the were done, the information received could spots on the surface being formed by the be-soon tabulated. As soon is the list is completed I will forward you a copy. Just spent in attempting to trace the fungus into now I am turning my attention altogether the tissues, but at present this attempt has to the leaves and branches of the vines, as not been successful. The inicroscopic ext these, especially the leaves, will not be amination of the warty patches on the available for study in a short time. If you branches shows that they are due to the have in the library of the commission any special work on " Fungus Diseases of the derivath the cuticle, where it has formed a "Vine," or on "Microscopic Fangu," I network of short jointed branches. This should be very glad to see them, I have branches, and the fruit bunches have dried growth caused the epidermal cells, in con-tried to precure them in Les Angeles but

> Lam. Yours faithfully. ETHEFFER DOWLES. San reduce Cr. October S. 1888.

VALUETIES MOST AFFA. TED

During the week fresh parts of the vinevard have been gone over and the micromation of fresh parts of the vineyard,

ure of apparent importance so far as the parts of vines above ground are concerned.

The younger vines have cone off in the same manner as those much older, as here and there single vines, and in other places groups of vibes have been attacked, the only difference noticeable between the condition of these younger vines and the older uing of the vines from c'imatic causes of plants, is the extent to which the vines have suffered. Amongst those examined. the Mature and Burger varieties have suffor dimest, the former soverely, the Trousscan, Zinfandel, Carignan, and Grenache having in this vineyard suffered but fittle. Some wild vines in a neighboring canon, to which attention was called, were visited. They seem to have gone off in a manner similar to the cultivated vines.

> The microscopic examination of the leaves and branches has involved the making of a large number of sections, but the fungus mentioned in last week's report has not been traced any deeper into the tissues with suffice nt clearness to amount to certainty. In the case of the branches, a fungus does certainly exist in the tissues of the epidermis, but the difficulty is to determine the depth to which it penetrates, In connection with this part of the subject the black fungus covering the leaves of olive and crange trees has been found to continu, in alligion to thers, forms quite like those found on the vines, and whether they are really the same remains to be seen. Up to the present, no traces of any insect have been found on the affected vines.

San & deck!, Cal., Oct der 8, 1885.

LEAF STALES.

The work, during the past week, of the vanishation of Layes and branches has som continued, some roots have also been x mond and some frish vines in the neighborh sold have been visited. The introse que oxamination of the bayes has not revealed any new teatures except in one haf in which every section made, showed that fungus spores had just begun to getminate on each surface of the leaf.

Some baf stoks, taken from an attacked vine from which the leaf blodes had fallen and which were decayed through a part of scopic examination of the leaves and their length, showed that in the decayed branches has been continued. The eximal part the cells were listered and often filled with an smorphous brown diposit which planted with other various and containing was vidently not simply the dried up cell younger vines than the portion previously contents, and the undecayed parts of the examined, has not revealed any new feat- same leaf stalks, in every case, showed well formed cells though they were thin caternally, immediately on being lifted, the would greatly facilitate the gathering and walled and empty.

The branches examined were taken part from attacked vines from two vineyards in this neighborhood, some four miles apart, and part from strong healthy vines, comparing sections from the attacked and healthy vines, a marked difference was seen. In every case the sections from attacked vine branches showed the different components of the tissues to be regular in shape and siz , but the cell walls were thin and the cells quite empty. Here and there a single grain of starch could be seen, and in some of the groener branches a few chlorophyll grains remained in the outer layers of the back. On the other hand the sections from branches from healthy vines showed that every available space was crowded up with starch and chlorophyll grains and the cills were well formed and thick walled. The branches from attacked vines were alive and showed no sign of disease, in some instances even the sag could be seen slowly oczing from the freshly out surfaces, but the life was evidently at a low clds,

Some roots, the more fibrous portions. from attacked vines have been examined, and, so far, have shown no sign of disease. and this examination and a comparison with roots from healthy vines will be continned this week.

The examination of other vines in this district was mainly confined to a plot planted with Binger vines and a portion of a plot planted with Zurfandel vines was also looked over. Scattered about amongst the Burger vines were some of one of the black varieties. Almost all of the black vines have gone wrong and many of the Burger vines are in as bad a plight, but these latter are reported as having succrimbed to an exceptional spell of hot weather, whilst the former are said to have fallen under the attack of the so called Los Angeles Vine Rot. In each case, however, the appearance of the vines is the same. the branches are either unripe or only partially ripened and are destitute of leaves, whilst the bunches of withered fruit still hang on. Many of the Burger vines have made an attempt to start new shoots, Amongst the Zinfandels many vines have lost all their leaves and have an appearunce similar to those attacked by Rot, and these too are reported as having given way to the spell of hot weather. It is to be noted that, so far as this investigation has gone, those vines growing on light soils have fared worst, and, other things being equal, the dampness or dryness of the soil almost seems to be a matter of judiffer nee,

One consoling feature is that up to the present not a sign of anything in the shape of insect pests has been observed.

San Gabrid, Col., October 15, 1888.

EXAMINATION OF STEMS AND ROOTS,

During the past week a constant lookout has been kept to catch any new feature that might have followed either the few hot days, or the two showery days; nothing except a slight increase in the amount of fungus spots on ripe berries was noticeable.

In examining the stems and roots of vines, a constant watch was kept for signs of injurious insect work, but nothing of this kind was seen. The vines examined were all attacked, and had entirely lost their leaves, and were taken, some from high ground, some from lower bivels, from both light and heavy soils, and varied in age from six to fifty years. Each vine taken

stem was pared away all round the outside, tabulating of the information required. and then split down its entire length; portions of stem and roots being taken away for microscopic examination,

With two or three exceptions all the vines showed some portion of the stem to be dead, there were either dead putches in the heart wood, or else stripes of dead wood or bark, which did not always run straight up and down, though they followed the twist of the stem. In nearly every instance these patches of dead tissues could be traced back to some external injury of the stem, or else to a small root or branch that had died right back into the heart wool. In some vines the stem had evidently been subjected to a hard pull. which had slightly opened the crown, this injury had partly healed up, but not perfeetly, it was plain that the two surfaces had skinned over but had never grown together properly, damp and dut had found a resting place and then decay had set in. In one stem through some opening which could not be traced, a grass seed had found its way, had germinated, and was sending out vigorous roots upwards through the center of the stem which was thus being gradually split asunder; this was in a Mission vine of some six years old. In two stems white ants had begun to clear out the dead parts. The tissues of the stems, where alive, were empty, and the cell walls were thin, but otherwise were in a norund condition.

The roots, whether dead or alive, did not show any sign of disease, but presented similar features to those observed in branches taken from attacked vines. In all the tissues the cell walls were thin, the components of the woody tissues being either quite empty or almost so, the cells of the bark were fairly well filled with starch. One specimen which had a sound stem, and had attempted to put out new shoots, had all the cells quite

Roots taken from a healthy vine showed thick walled cells and an abundance of starch in all parts. The fibrous part of throots was difficult to get in anything like good order, the soil being so dry it was almost impossible to get good specimens of the extreme root ends, many of the fibrils obtained were dead.

Sceing that in nearly every instance the dead and decaying parts noticed above could be traced back to some external injury not connected with any disease it is important that every care possible be taken in cultivation, especially when the vines are young and the bank tender, to protect the plants from hard knocks and wrenches, as such ill usage must of necessity weaken the vine, and so cause it to fall more peadily under the attacks of animal and vegetable

San Gabriel, Cal, October 22, 1888

J. H. Wheeler, Esq., Chief Executive Viticaltural Officer.

Dear Sin:-Enclosed is a draft of series of questions, which, if answered properly, I have thought would give all the information as to the conditions of vineyards, that could be obtained by correspondence. If these questions were printed and sent out to vine growers together with a stamped addressed envelope for return, and a circular explaining the matter, and assuring correspondents that the information given would be treated as in confidence, at any

I have shown the enclosed to Mr. Shorb, who has made some additions, and he concurs with my suggestion. Should the Board consent to the course suggested, you will doubtless be able to make improvements in the series of questions. Whether the Board adopts this course or not, I shall be very glad of any hints you could give me in the matter,

Yours faithfully, ETHELBERT DOWLES.

San Gabriel, Cal., October 25, 1888.

Was your vineyard planted with cuttings, roots, seedlings, or if grafted, on what stock? Name varieties,

Whence obtained? (Locality.)

Location, height above sea level and slope of vineyard if any,

Kind of soil and subsoil,

Describe irrigation practiced.

Describe pruning practiced.

Have the vines suffered from any disase, if so describe, and give the date of first and subsequent attacks, and did the vines attacked start early or late?

Did attack come on directly after fogs, can or hot weather?

Direction of prevalent winds.

Are there any olive, orange, or other orchards in the immediate vicinity, if so on what side of vineyard are they located, are they affected with scale?

Which varieties of vines have suffered most? Name them in order, beginning with the most affected.

What varieties, if any, are exempt from disense?

San Gabriel, Cal., October 29, 1888.

Since the last report some fresh vineards containing Mission, Blanc Elba and Trasselas vines have been examined.

So far as the Mission vines are concerned. the only difference noticeable between these last vines, and those previously examined, vas the extent of the mischief done, one plot of some twenty-five acres has almost all the plants badly affected, the vines showing nothing but unripened canes. many of which are almost or quite dead. and bunches of dead partly formed fruit.

The Blanc Elba showed very little sign of disease, it was only here and there that a defoliated vine could be seen, and these defoliated vines could easily be divided into two groups, one in which the canes were well ripened, though not fully so, and another which had all the capes unripened. with bunches of dead partly formed fruit, still hanging on them. Specimen canes from each of these were taken and exammed under the microscope, the ripened cames showed all their tissues to be well filled, whilst the unripered canes, as usual, had every part quite empty. One of the plots of Blane Elba containing both rip Mission vines in it, and it is quite possible; that the unripened plants were the Mission, if so, then this plot had entirely escaped. for the tipened vines which were defoliated had probably lost their leaves from some cause other than the so-called Vine-rot, all these were on low lying, moderately lield soil

Another plot of Blanc Elba on a steep slope and light soil had a few vines, especially on the highest ground, which had gone wrong, these all showed the usual features of unripened, and dead canes with up had its stem and roots closely examined rate so far as all names were concerned, it bunches of dead partly formed fruit,

The Blanc Elba seems, so far, to be fairly sistant, another feature noticeable is that it does not seem to be a favorite with the cottony cushion scale, for though one of the above mentioned plots is practically surrounded by orange orchards, much affected with scale, the vines are only slightly attacked, at the most about two vines deep all around the plot and these had only a few insects on them, though other plants near by were completely covered with scale.

The Chasselas vines had been attacked somewhat severely, and in the same way as the Mission, and seem to stand between the Mission and Burger as to the extent of the damage done,

It should be borne in mind that, at present, it will be unwise to give any expression of opinion as to the qualities of vines as all these favorable or unfavorable features may be reversed when new districts come to be examined.

A considerable amount of time has been taken up during the week in a close search for signs of the Leaf Spot disease which is the forerunner of Black-rot. A few vines had been found having their leaves affected with a Leaf Spot, but up to the present, none of these have proven to have been caused by the Phyllosticta labrusca which is now considered to be the form which the fungus of Black-rot, Phoma uvicola takes when developed on the leaves instead of in the fault. The destructive power of Blackrot fully justifies any amount of time and labor spent in its detection.

The only fresh vines inspected during the week were some very old Missions, in a vineyard on undulating ground, with a general southern aspect, the soil varying, Here, as usual, the vines had been attacked in an apparently capricious manner, in some parts, large 1 atches had been taken leaving here and there a single healthy vine; in other parts the vines looked particularly strong, still, in these places single plants could be found which had gone un. der; some of these diseased patches occupied the lowest ground, others, the highest, and though the majority of the plants attacked were on light soil, there were many on the heavier ground. The microscopic examination showed nothing but the features already met with.

San Gubriel, Cal., October 29, 1888.

FUNGUS ON FRUIT.

Whilst examining the fruit still left on the vines, some specimens were found which differed from any previously met with. In one the berries, plnmp and at first sight healthy-looking, showed patches of the surface covered with minute pimples, without any discoloration. The small pimples were found to arise from a thick network of mycelium under and in the epidermis of the berry; several of these knoba may be connected by large threads. The and unripe vines was said to have a few larger mycelial threads are divided by numerous septa giving them a great likeness to the fungus on the branches mentioned in the Second Report, October 8th. A transverse section through one of the knobs shows that each is the fructification of the fungus, though of what particular kind is not certain, as the specimens examined were not fully grown, and at present have refused to develop further. The color of the large septal mycelial threads is greenish-brown. The unripe contents of the pustnie are colorless, all the tissues have their cells distorted and filled with a brownish denosit.

e finding the first specimen, others vines.

nother specimen the surface of the showed a whitish baster. This to be cans al by the catalle being ip by the growth of num rous browns d bodi sund rit. U der the miere here were found to be composed a rry bearing sev ral of these bodies healthy-looking. laced under cover, in moist air, in ening, and by the next morning it overed with a thick mass of whate. ing mye lium, with masses of large reen spores on the tissue of the

Unfortunately the growth was to to catch the different stages of it ach of the above the whole of the berry was invadid by ingus. Considerable difficulty s part of the work arises from t that, on some days the atmospher to be loaded with fungus spor a tn extent that it is almost impossible ke a preparation for the microscipt getting something for ign to the en under examination. This firt terferes considerably in the grownim us under cover. Since the shore luring which these may be exposimination is sufficient for the intro n of elements, detrimental to the sucf the experiment, many specimenthus been randored uscless. This will doubtless cease when more nell have fallen and washed the air, Gubriel, Cal., November 5, 1998.

ONDITION OF VINES AT OBANGE

e the last report visits to vineyards

ther part of the county and to some ground in this district have given nteresting information, he early part of the week a vineyard.

district was visited, a part of which ited on some of the highest ground neighborhood. The portion of most t here has a general east and south ; the soil is moderately light gravel. ines, Muscats, were in good condihere being only here and there a ripped of its leaves, and showing the unripe canes, and bunches of withruit. Specimens from these attacked wire taken, and under the microscope howed the same characters as similar from Mission vines have done, viz. dls of the tissues thin-wall d and ampty.

er in the week several vineyards at e were visited. These are all on low I, the soil varying from heavy adobte light sand. Here the Muscat was aly variety seen. Ou the heavy d all the vines, with the exception of lot, were either d ad, or almost so ny places the vines have been taken and other fruit trees have been This work is still in progress. ditary exception to this state of things e heavy ground is a price of heavy l which has been plant d with Muscat gs from Riversid , a district as yet ected. These were put in quite at the of last May, They are now particulvigorous and healthy looking, the foliing exceptionally clean, and this, too, e midst of a tract in which all the have been swept off. In contrast to another piece, similarly situated, was ted, which was also planted in the

probably the last deposit. This has a small strip of beavy gravel running mat |mg vigorously, soing deep down into th one corner. On the small portion of heavy -oil all the vines are dead; as the heavy ground tails off into the light, so do the callying decrease in number, natified the s of larg short hyphre. A piece of quite lights of the vines are all strong and

The trouble with vines at Orange is reported as having begun about three years izo. So far as soon the distruction of sines is new almost total,

The above facts do not lend support to the id a that climatic conditions are at the bottom of the present vine trouble, though such conditions may be a factor in the case They rather tend to the view that the trouble is the result of a disease, perhaps infectious, which is capable of being propaget dily estings from infected areas, vessel be will to ke pla careful watch on such plantings of healthy cuttings as that noted above.

Specimen cates from attacked vines were tak n and put und r mier scopie examina-. in. They revealed no new features, the issue Ising almost or quite cupty. One speciment from a strong growing cane was interesting. This, throughout its length, had about half its circumference ripened; the remainder was still green. In the ripand part the bark was clean and brightcolored, and the sap was still flowing; in the green part, which was also the top side of the branch, the bark was thickly spotted with the fungus mentioned in earlier repats, and no sap was flowing; under the micro-cope the diff rence still showed, the ripened section having its tissues wellgrown and full of starch, the unripened portion having its tissues quite empty, and contents. not fully formed.

The fungi-mentioned in the last report. No. 6, have not developed in the direction required, the altered conditions arising from placing the specimens under cover seem to have caused a great development of mye-lium, while the fructification has stood still.

Santa brief, Cal., November 12, 1888.

CONDITION OF MATABO VINES.

During the past week another examination of roots, stems, and branch s has been mad ; this time of Mataro vines. The previous examination was unsatisfactory with respect to the fibrias part of the roots, the dryness and hardness of the seil causing the extreme fibres to break off in the removal. On this occasion a group of affected vines, including a quite healthy specimen, was banked round, and suffice at water run in to soften the soil down to naturally lamp earth; in this way fair specimens of all the roots were obtained.

Thes. Mataro vines, six years old, and standing on light soil, lost their leaves later in the season than the other varieties before xamine I, and, therefore, have their canes more ripered, in other respects they exhibit similar features to these found in the other varieties, vizi, the branches stripped of their haves, and having bunches of partly form d withered fruit still langing on.

A few of the smaller roots were dead; these were not observed to be on any purticular side of the vine. In one or two instances roots were found which were dead igs from Orange; this has all gene maining portion being quite sound; these were near the surface of the ground. Ex- | Many vine yards have been cheated out, and | represented by patches of dead vines, and

een found amongst the Mission and pures, is situated on very light, sandy soil showing neith r dis as d patches of bark. running down to the river, of which it is nor malformations, nor yet any sign of insect life; they appear of to have been growsoil befor branching out, to fibres were obtain de from main roots at a base depth than two feet, nonly were consol-rably deeper. About helf the extreme fibres from the left ctod vines were dead, all those from the healthy vine were living. The microscopic features of three after d vines, typical spicimens, and of one healthy vinare given below.

No. 1, affect d. Stem. Greater portion I ad. Calls of all the tissu's quite empty, and thin wall d.

of all tissues quite empty, but moderately thick-walled, the external bark very full of the fungus mentioned in the Second Report. October 5th.

Roots. Cells of the bark in some cas s contained a very little starch, in others a little thickened sap; cells of woody tissues quite empty. Cell walls thin,

No. 2, affected. Stem. Cells of bark with a few starch grains; cells of woody tissucs empty, and thin-walled.

Branches. All green; the bark quite clean and free from the usual fringus; cells of all the tissues quite empty, and thinwalled.

Roots. Cells of bark in all containing some starch; cells of woody tissues quite empty, but thicker walled.

No. 3, affected. Stem. Part dead, main pertion alive; cells of all tissues cmity except for a little thickened sap.

Branches, Fairly ripened; cells of bark in places showing signs of decay; cells of all tissues mpty, exc pt in the bark, where a few were filled with brown altered cell

Roots. In each specimen the bark cells contained a little starch, the cells of the call walls in all were thin.

No. 4, healthy. Branch s. Well-ripened, cells of all tissues load d up with starch; and it grew no further, but dried up and cell walls thick.

Roots. The cells of all tissues in the larger roots were well-filled, in the smaller roots only the cells of the bark were filled; in all the cell walls were thick.

This vine still retained all its foliage, which was not yet b gruning to turn color.

The fungus mentioned above, No. 1, as occurring in the outer bark, is usually found on one side, the upper, of the branch, but in the Mataro vines, owing to the more upright habit, all sides able are invaded. in some cases it has formed a mat just undir the surface, but not coming outside,

It is evident that vines in the condition of Nos. 1, 2 and 3, are scarcely likely to live through the winter, even if they should do so they could not put out any healthy, vigorons growth. They have not been picked spots on the leaves, these were five years out as exc. ptionally bad, but rather as fair samples of the affected vines in the poot of Mataries

Sun trabible, Call, Nov. inher 19, 1888

VINES AT TESTEN AND SANTA ANA,

Since my last report, vineyords in and around Tustin. Santa Ana and Orange have been visited, the vines seen were of the following varieties, viz. Trousseau, Muscat, Zinfand I, Sultana and Frame Tokay From what was seen and reported, it seems that, part of this year, but with Museat for a short distance from the stem, the re- at the present time, of the vines left in the district, the Muscat is the one most affected.

Another vineyard visited, of about 300 ternally the rads were very chan-booking meanly all, possibly quite all, of the few remaining vineyards are affected, some to a considerable extent, affording but poor prospects of a crop in the coming year.

Amongst the Muscat vineyards seen was one of about 180 acres, this at a short distimes appeared to be in good condition, -howing plenty of foliage, a closer inspection showed that it was only an appearance, A large majority of the vines had put out a number of very short canes, none of which had ripened, neither borne any fruit; they still retained their leaves, but every vine had its foliage spotted with the peculiar yellow and brown spots, which are reported as being the sure sign of impending attack; the foliage of those vines which had made Branches. Bark fairly ripened. Cells the normal amount of good growth, in most cases showed the same signs. The soil in this vineyard was adobe and heavy gravel, getting a little lighter as it ran up into the foothills: the vines were six years

Another piece of Muscats, about 300 acres, partly on heavy gravel, and part on light sandy soil, was the best piece seen, the vines here had in almost all cases made a good growth and borne a fair crop, yet here and there were vines with green unripened branches, bare of leaves, the vellow spotted leaves were quite frequent, even on otherwise healthy looking vines; on the heavy gravel all the vines were dead,

A third piece of Muscats was a piece of cuttings from Redlands put in this year, having a few two year old vines scattered amongst them; the soil heavy loam, All the two year vines were touched in the foliage, and many of this year's cuttings showed the same signs, though a good growth had, on the whole, been made; viewed from the road, the piece looked in good condition.

A plot of Troussau vines three years old on heavy soil had suffered badly. This piece started well and promised a good woody tissues being quite empty, and the crop, but in July or the first part of August, about fifty per cent, of the vines lost their leaves, the fruit was not then fully formed, was still hanging on the vines; the branches of the defoliated vines were ripened, but somewhat thickly infested with the usual

> Of the Zinfandel vines seen, one plot was practically d stroyed, only here and there a vine being left; this was on heavy, adobe soil. A few miles distant, in the same vineyard as the Muscats, on light soil was a plot of Zinfandels in fairly good condition, some of the leaves showed the usual yellowish spots, but these were not present to any great (atom), these vines had given a fair сгор.

> The Sultana vines were touched to a shight extent, rather more than the second but of Zinfandels noticed; some vines had been defoliated, others had the usual yellow ald and on light soil.

The Flame Tokay, five years old, on light soil could scarcely be said to have been touched, here and there a lenf could b. found with yellow spots, but they were rare. These vines gave a good crop this year. None of the above mentioned vines had been irrigated.

It was the general opinion that, in this district, the trouble began three years ago, at that time a vine died here and there for no apparent reason, and as the instances were few they attracted no particular attention, the next year the single vines were

their attention was drawn to the yellow spots on the leaf; this year the patches have increased to whole vineyards.

The yellow spots may be easily nastaken for natural decay of the lenf, especially at this time of the year, but a close inspection will detect them, and show the difference It was also reported on reliable authority, that the vines in other parts of the State, north as well as south, showed decided signs of impending attack. This was reported as the result of personal observation

 $San\ timbriel,\ Cal.,\ November 26, 1889.$

CANES PROM MUSCAT VINES

The examination of branches and leaves from vineyards at Tustin and Santa Ana has given results somewhat contradictory to previous experience, so far as the branches are concerned. The branches were taken as much as possible from the vines which appeared to be fair samples of the vineyard.

Among the muscats may be found a great many branches having a stalk of unripened wood, running the entire length of the cane, this stripe sometimes stops at each node, but usually it runs right along, and often embraces as much as half, the section of the branch. In color, this unripened stripe ranges from greenish-brown to almost black, it is usually thickly spotted with the fungus mentioned in previous reports as occurring in the bark. If the fungus is distributed all over the branch, it is always more abundant on the unripored stripe; in cutting one of these branches through, when fresh, it is often apparent that the uniquened section is much diver, right down to the 19th, than the remainder of the branch, this difference is plainly marked under the interescope. The ripened section almost aiways has its cells well developed, and filled with starch, whilst in the unrapened section, the cells are always empty, and not so tally formed. There would seem to be an intimate connection between the stopes of unripened tissnes, and the fungus found in their bark. This same kind of fungus is generally abundant on the wholly unripened branches of affected vines. Whether the fungus is present as the cause, or the effect of the unripened state, can only be satisfactorily determined by experiment.

Amongst the specimens from muscat vines examined were the following:

- 1. Cane part ripe and part green. The bark of the green section spotted with fungus, all the parts of the bark and wood not well developed, no starch anywhere except a very little near the cambruin layer in the ripened section.
- 2. Cane part ripe and part green. The back of green section spotted with fungus which spread over on the ripened section Bark of green section thin, its cells and those of the wood thin, walled and empty, in the ripened section both bark and wood well developed, and filled with starch,
- 3, Cone part green and part ripe. The bark of green part thickly spotted with faugus, cells of bark and wood thin walled and empty. Bark of ripened see tion clean, cells of bark and wood well developed and filled with starch. In this instance there was a gradual transition from one stage to the other,

Specimens from those vines mentioned in the last report as having made a short growth of branches which had not ripened, their wood was found to have all their tissues quite empty.

The examination of canes from the

those found previously. Hitherto it has al- four to five spores, cylindrical in shape, foliated vines had their tissues almost or quite empty, as in the case of the Mataro vines mentioned in report No. 8, but the canes from these defoliated Tronsseau vines were found to have their tissues quite as well filled as those from vines which had retained their bayes; only one specimen was found which had its tissues empty, black, All the others were quite normal,

The examination of the leaves has given no satisfactory results so far. In the district last visited, Santa Ana and neighborhood, the leaves which were reported as being evidence of a vine being affected, showed the following characters: Faint yellow spots make their appearance usually near the martin of the leaf. These can he detected by holding, the leaf up to the light, when they would not be noticed if the leaf were viewed as an opaque object. These spots enlarge, become more decided in outline, deeper in color, and finally become light brown and dead. When this condition includes the whole margin of the lenf, the dead part earls over upon its upper surface. Sometimes the spots appear all over the leaf, and they often have a narrow, well defined black, or dark brown outling So far, nothing has been found which can be satisfactorily jut down as the cause of these spots, a small fungus, probably species of Cladosporum is often present, and a solitary example of resting spores, probably of mildew, has been met with, but these cannot be considered as evidence

The examination of these bayes will be continued as long as the supply lasts, a gentleman at Orange having kindly undertaken to forward a supply twice every week,

San Gabriel, Cal., December 3, 1888.

FUNGUS ON MUSCAT LEAVES,

The work of the past week has been mainly the continuation of the examination of the leaves of Muscat and Tokay vines. The dry leaves did not show anything new, the fungus mentioned at the end of last week's report, as being a Cladosporium, was scattered sparingly over the dead patches, besides this, nothing could be seen either on the surface or in the tissues. Three pieces of Musent leaves, each containing a dead patch, which had been floated on water, were found, after the lapse of four or five days, to have developed a considerable amount of mycelium on their under

The microscope showed that large numhers of spores similar to those noticed in report No. 6, November 5th, had been produced; the younger branches of the mycelium were colorless, the older were dark brown, with many divisions, giving them almost a beaded appearance. On both sides of the leaf were found a number of pustules of different sizes, which varied in color, evidently according to age, from clear very light brown, to almost opaque black, and which may eventually turn out to be of the following three kinds:

1. These are evidently perithecia; they are spherical in shape, very dark brown in color, and, in the specimen under notice, seemed to be almost loose on the surface of the leaf, being apparently held on by only a few threads of mycelium; on being runtured they were found to contain some granular matter, some yellow brown oil globules, and four or five asci, which were almost spherical in shape, and furnished Tronsseau vines mentioned in last week's with a very short pedicel, colorless except ter,

report, has not given results agreeing with for their contents, each useus contained ways been found that branches from de- with rounded ends, and filled with fine, granular matter; the asci-seemed to enlarge after escaping from the perithecium,

- 2. These are larger and more deeply imbedded in the tissues than 1. They are not yet fully developed, but appear to be pycidia containing stytospores; they vary in color from clear brown to almost opaque
- 3. These are smaller than either 1 or 2, and seem not to be fully grown; at present they have a clear spot at the apese as though there would presently be an opening there: whether these are spermagonia or not remains to be seen. All the above mentioned forms especially 1, 2 and 3, are much more frequent on the dead patches of the leaf than elsewhere,

There is a great resemblance in these forms, to the fungus causing Black rot, but the shape and number of the asci and their spores, and the fact of the pustules occurring on both sides of the leaf show that it is not the same.

The Amination of the above forms will be continued and an attempt made. during the ensuing week, to obtain similar growths on other specimens. Of course it cannot be taken for granted, from this one example, that this fungus growth is the cause of the dead patches on the leaf, as this can only be settled by actual experiment, and no deductions can be drawn until repeated experiments have produced similar results, not only on single leaves, but also on entire plants,

With respect to the printed question forms which were lately issued, it is to be regretted that so few vineyardists have returned the information asked for, only seventy-four replies having been received up to date.

San Gabriel, Cal., December 10, 1888.

TUNGL ON LEAVES IN WATER.

The examination of affected leaves, both floated on and submerged in water, has been continued, On some specimens an alandant from growth has been formed. a part only of which has been examined. So far as the examination has gone the specimens have shown a more abundant growth on the under surface, though in the specimens which were submerged there has been a considerable development on the upper surface also. The mycelium, in some cases, has been abundant enough to form a growth hanging down as a floculeut mass of quite a quarter of an inch in length. The forms best developed as yet are as be-

No. 1. A perithecium described in last week's report as No. 1. It probably belongs to mildey.

No. 2. A perithecium. These are not deeply imbedded in the tissues of the lenf; when ripe they are somewhat loose on the surface. Color, black, when seen as an opaque object; dark-brown by transmitted light; spherical in shape, with a small, blant papilla at the apex. A transverse section shows an onter colored shell of pseudo parenchyma, lined with a clear, colorless zone; the interior is filled with some granular matt r and a number of asci. Each aseus is clongated, cylindrical, with a very short pedicel, straight or slightly curved, transparent, colorless, except for its contents of 8 ascospores,

No. 3. Ascospores from No. 2. Each spore is spindle shaped, transparent, nucleated, and filled with grayish granular mat-

No. 1. Snmll spores from capsules about the same size and appearance as 2. They are very dark greenish-brow color, covered with minute projections, show signs of segmentation; they are be on short pedicels. The developmen these has not been seen in all its stage it has generally taken place during night.

No. 5. Capsules almost loose on the face of the leaf; they are almost sphe in shape, black when opaque, very d brown by transmitted light. The myo threads at the base are septate, color except close to the capsule, where the tinged with brown. The weight of cover glass was sufficient to rupture capsule; the contents were granular me abandance of dark yellow oil, and s rounded spores, 4 These were appar not ripe, and may be a stage of No. 4. Nos. 7 and 8. Spermagonia? No

fragment of a diseased patch showing small capsules on the under surface of leaf. No, Sa side view of one of the sules. These are apparently spermag All stages of their development hav been found at present. They are d imbedded in the tissues of the leaf, an much smaller than either of the f above mentioned. They vary in color clear, light brown to almost black. are spherical in shape, with a clear sp the apex, where there is a somewhat gated papilla. The contents, (sperms are very small spores, cylindrical in s

even under the one-twelfth inch obje At present attention is being paid to the variety of forms produced, the the tracing out of the complete grov any one of them. The growth in so rapid, and these, when taken in must be watched continuously or so the stag s in their development are c to be lost.

colorless, locomotive; by what mean

locamotion is obtained could not be

San Gubriel, Cal., December 17, 188

MISSION VINES.

In report No. 1, October I, some sion vines were mentioned as showin tain full-grown branches, which ha ripened, and which showed on their surfaces certain warty patches of a color, which were found to be due growth of fangus immediately under the enticle. Many of these vines been examined during the past week in no instance was one of the above tioned branches found alive, all, so seen, were dead, and the fungus gi which at the laginning of October si as a fine, branching system, bas now considerably, and shows patches and stripes, as well as fine branches.

Besides the Mission, the Mataro, ache and Carignane varities were se these, the Cariguane showed by fa cleanest branches. Next came Gre and Burger, and last the Mataro, showed branches thickly spotted with gus like the Mission.

The diseased leaves mentioned i last two reports, have been watchedtl the week for further developments new forms have been produced, but has been in some specimens a gre crease in the numbers of the spore especially is this so with those men in last week's report, as Spermagoni

1a report No. 11, December 10, expsules were mentioned as possibly pycindia, this supposition has prove in number, have reported varieties of in very small starms present.

us exempt from disease, they have [2]. Spure and branches, spure alloy. r the first trial.

ETHERBORA DOWLES, Cabril, Ca., D. comb r 21, 1888.

ring the past work a viney and of some ieres at Limanite Lank was void to situated on a slope facility the source unning back to the total the mount the soil light, sindy I man and good many large stones, the vites are conively quite young, from ity its to I old, excit a two scatt red points a are apparently siveral years old to varities ar Zintandel, Baine, Edui, , Sultana, Carignan, Bassal, On a-Mataro, Petit Pino, and Treusseau. red about, amongst this are the Muss mentioned above this ar y all Missions. On the whole, the ard has not been much damag dib, evailing dis as . In vainti s aft e d are the scatter of Mossions, in any and call, bring diad, next the Brights, oportion could not be use rune 1, novi atare, Pisco and Zinhand which were dy affect d. The Greach , Blanc,

Sultana, Petit Pine, Carignan, Prousseau soom to have oscaped. The and affect divines show dithense in res, so far as could be a me new the je has falien ith branch sisk awid an dint fungus growth, and though the thes are no longer group, stronks and as of unripened wood could be pour steeted, these and r the increscope nothing new, the usual state of empty betag observed on som vines, Misthe bunch's of partly forms I day if nit were still hanging.

e roots also give no niw cyribine. and there one of the larger roots was I to be dead, and a certain proportion offbrius riots was dead. The Birhad been sulphured one for nin lew, the Malaro sughtly sulphired, as plately some w has not been very sever, though it appeared every year.

parcel of specimens from Sonema ty has also be a received for examina-This has been dene and the result Lictor,

e specimens consisted of three spinbranches and a few separate canes,

some leaves which were very dry and ered. my of the branch s, on the surface.

ed nothing in particular, boing som-

et. The Aser from perithecia formed was half dod and half alive, the back was he first lot of sperm as start define than, the cells were filled with trown desince, now show their centents much posit, and in the weady tissues in starch. er, as eight oval spores, light yellow was present, in the portion below this, story n in color, and alloady, before escape adve, the tessues of back and weed were ap-from the Aseus, much segmented, pea ntly healthy, but were a nest enjoy relevancy ardists between thirty in bother being only a small are interested as

written to during the week for further branches all everpt two bears. The sets mation, and their representation of sets were only like for a short class in the sets.

The Experimental Conservatory the spin. Turthis both second and bears he een started, reded two site prisciting is those lith is an electrical transition of the horse plant in the back who empty, excitation had were fit if with brown diposit. The case of the wealth with brown diposit. The case of the wealth with brown diposit. of the wood wire associality on point to mid-many rays where a small property. starch in small grains was prosent.

age income of fungus on the surface. It is a first state of a first state of the corresponding as an appear to the of the back with the state of the state

su is thicker-wall dithen in previous specific in the service starch and in big rights in the bark, and fine right starch and in big rights in the in-dullary rays as well as in the research of the service in the service starch and in big rights and in the service in the middlery rays as well as in the research of the service in the service of the service in the se

ed r danternally. This branch had every year by yor ward iffully, and Fr su traise ember, of the total vedenty attained almost its full growth by has, who head wey irsegrewer unknown. This result is that, for deary set in. Ad the fix we compty have bead ying domination they more state of the result is except in the ned deary rays, while the relation to the read house of the relation of th when small amount or brown diposit. The distribution is having and the first ship control for any years there is have being viry much discolored and buttoment or raisons to have just distributed by xaming discolored but it.

Both on case our dipatches and withgarages after with home case (i.e., pasted s, quarter), the decoration (i.e., v.s., earlier, i.M., at van s, decoration (i.e., v.s., earlier, i.M., at van s, decoration the basis tw. Reports, Nos. 12 and 13, 1

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CALIFORNIA RAISINS

The Year Envirable to Both Packers and Producers

The end of an 1888, is as a second of

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SAN TRANSFORMATICESTALE

1 81 1855. di. It was, 1 arer to est the enthorthe examinates closely, but it might insolite Leadon, Lagland. Who of the arms yet for a form a torthous was plain that they had appeared split the quantity was a clear was in options much as the fit even of the recorded a many across observed on affected Misses wide, and I causes is likely to in recorded. It would be it seek when on yours, though the particular decay and those from now on. The question is some of their as most a tivity to a sorts of real in agreed on the edge could not be turns in etal that the raisin indistry of estate at author land land pro-shearily California na lit be so ribin . We do not sy ryah reas 2 and que On the whole, think so. The fact of the case is that the the undividuals so have hear staid its are that the peaks from there is so the great resulting a line cost of a contact a_{ij} resulting the dimension has to be a I as not a very is the ansat Lagrange for a contact the mark to in the light of a very great livery, and hands due names, as the scale paper was a wire only used by the ment but to have some more respectively. they are being nor a university as d and it it is the total plane to nearby and the constant that is standard in a small year the rate in the constant C . The countries by year, as the proceeding some parties as an outlied as that the more in the year and the more and proceeding the more and the more and the more stands the case pack for some in Canfornia are well to the more than the case pack for some in Canfornia are well to the more than in the case and the case pack for some in the case of chan looking in the upper surface so the first of the was a considerable sprinking ingus, especially towards the base of branch, the extremities of many were and had exidently never rightness.

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ITALIAN VITICULTURE.

CILTIVATION AND PRODUCTION OF THE VINE, WITH CHARACTER-ISTICS OF WINES.

[Continued from page 98.] EMILIA.

On all the plains of Emilia the vine is cultivated, and on the hills the cultivation on trellis is being extended. The plains between Piacenza, the river Po, the Apennines, and Bologna produce large quantities of wine which, although not extraordinary in strength, is very dense in color and rich in body, and is considered by the trade almost a blending wine; and before easy communication was opened up with the Southern provinces, the Venetian and Lombardian wine merchants came here almost exclusively for such wines. White wines, however, are much more extensively cultivated on the hills near Parma and Modena; but many vineyards have been replanted with black grape vines, and the red wines produced are less deeply colored, but more alcoholic, well flavored, and more ausceptible of amelioration than those of the plains.

From Bologna towards Ravenna and Forli, large quantities of very cheap common wines may be found. Here the proportion of white grapes increases on the plains until at Lugo and Bagnacavallo the cultivation of them is almost exclusive. At Comacchio and other places, where the soil is composed of the sand thrown up by the river Po, more generous and conservable products are obtained. On the hills between Bologna, Rimini and Cattolica, where Emilia terminates, the black and white grapes are both cultivated, and they give wines of more flavor and alcoholic atrength than those of the plains. In the district of Bologna the Negrettino holds the first place; while plantations of the Sangiovese variety increase in Forli, where the wines have a tendency to approach the Toscan atyle.

Throughout the whole of Emilia the grapes are sold with great facility, which is seldom the case in the Lombardian and Venetian provinces. The wines of the plains of Emilia have for some years past been ready for consumption during the first months of the winter, and from experiments it has been found that if the wines are filtered, they may be consumed

On the hills near Bertinoro, sweet wines, known as Moscati, are made, and as they are much appreciated by local consumers, they generally fetch high prices; and in order that those who do a large trade in these kinds may make certain of a sufficient quantity of them every year, it will be advisable to purchase them in South Italy, especially in Sardinia, Calabria and Sicily.

The plantations on the hills of Emilia of foreign varieties, as Pinot, Cabernet, Malbec, Sirah, etc., have, for some years past, been continually augmenting. Very notable is the improvement made in these wines when mixed with small quantities (say from IO to 20 per cent) of native grapes. The plains of this region, being constituted of very rich soil, in some years give such an ahundance of fruit, that grapes must, and wines may, be purchased at very low prices, as, up to the present, few have been in the habit of storing the wine in cellars for future years. The composition

of the principal wines of Emilia varies, as is shown by the following table:

Wines.	Alcohol	Aculty	Dry Residue
Red Wines.	per cent.	per mille	per cent.
Sangtovese	101 to 133	1 10 Kill	22 (439)
Lambritsco	27	05:10	55 + 55
Cagnina Fossa	11:5	0.510	\$ BTDJUS
Canitia rossa	01 2	11 - 7	•
Common	11 12 12	大・大の金	**
H hate Writes.			
Albata 101 133	20 - 13	3 : 0.0	2
Trobbiano	21 12	01 : 10	:
Continuo	7::	100	

The average production of wine in each province of Emilia is estimated as follows:

	Heetolitr
Piacenza Parma Reggio Emilia Modena Ferrara Bologna Ravenna Forti	341,000
Parma	352,11
Reggio Emilia	451,718
Modena	271,300
Ferrara	121,700
Bologna	335,000
Rayenna	275,300
Forli	262,50t
4 1 4 7 10 10 6	1.1 - 0.00

The average production per head of the

population is as follows:	
Districts.	Average production of Wine per head.
	Litres
Fiorenzuola d'Arda	
Average for the Province of Pia	сенzа152
Borgos Donnino. Borgotaro. Parma	113
Average for the Province of Pa	rma143
Guastalla	179
Average for the Province Reggi	o d'Emilia., 1×1
Mirandola Modena Pavullo nel Friguano.	
Average for the Province of Mo	dena 97
Cento	58 129 35
Average for the Province of Fe	rrara 53
Bəlogna Imola Vergato	131
Average for the Province of Bo	logna 74
Faenza Lugo Ravenna	
Average for the Province of Ra	veura., 1 39
Cesena Forli Rimini	
Average for the Province of Fo	rli105
Average production per head i	n Emilia112
Among the merchants an	d growers of
commercial importance the f	ollowing may
be mentioned:	
The Società Enologica o	of Scandiano,
especially for white wines.	
Marquis Ferdinando Bevila	equa, Bolonga,
Cosare Gurrieri, Castel S. I	Pietro.
Count Doeid rio Posolini	linola

Count Desiderio Pasolini, linola.

Fattoria Torlonia, S. Mauro di Romagna. Valli & Gagliardi, Lugo,

Uberto Gallett, Lugo.

Count Guarini, Forli.

Sen. Count Achille Rasponi, Savignano. Cacciaguerra Bros., Montiano.

Count Bart, Manzoni Borghese, S. Marino, Eredi Conti Battaglini, Rimini.

THE MARCHES AND UMBRIA.

Umbria, which includes the provinces of province of Marchea and Umbria is:

Perngia on the Mediterram an slope of the Apennines, and the March s which embrace tle provinces of Pesaro, Aucona, Macerata and Ascoli on the Adriatic coast, produced in the past almost exclusively white wines; but the cultivation of red varieties, and especially Sangiovese, is now being very greatly extended. Nevertheless, the principal product is still white wine.

The culture of the vine here was until quite recently, almost in every case associated with that of trees, as, owing to the low prices, the cultivators did not feel disposed to adopt any but the cheapert methods. Now, however, the vineyardwith exclusive vine culture are rapidly increasing.

The Upper valley of the Tiber does not produce very strong wines, but what is produced is ready for consumption within a few weeks. The northern slopes and th most elevated parts give v ry tasteful and light wines. Those produced at a moderat altitude and in favorable situations on th hills, are naturally a little sweet, resem bling Orvieto wine, and after complete for mentation are sufficiently alcoholic and very similar to those of the Marches.

As a rule the wines of this district are rather light, and that is the reason why is this province and on the borders of th Abbruzzi it was customary, since the tim of the Romans until recently, to concen trate, by cooking, a portion of the must, the admixture of which with the bulk gavthe wine a sufficient body, and enabled it to be kept through the summer. Although still practiced to a small extent in remotparts, this system is now obsolete. For some years past the cultivation of varieties rich in sugar has been extended, as it was found that the flavor of the mixed wines was very little appreciated outside the region, and therefore a profitable market could not be found for the surplus pro duction.

Owing to numerous vineyards being planted on the hills, and the excavation of better cellars and grottees, the ancient systems have been almost entirely super seded by modern methods, and the vino crudo (which is not mixed with concentrated must) of to-day keeps well and can be exported at moderate prices.

In the figures which follow we give the composition of the wines produced in this region; in these, we, of course, take no notice of exceptional and capricious styles of wines which may be produced in small quantities, but which for various reasons are not likely to be extensively grown:

Dry Residue per mille.	12 1 1 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Acidity per mille	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Alcohol Wines.	Sangawee (95) 11 Rabanina (96) 12 Trebision Wile (96) 12 Moserto (197) Moserto (197) Sommon Wile (197) Johnson Wile (197)

The average production of wine in each

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02	1			į							ì	Ĺ	Ī.			٠.	٠.		٦					Ĺ	ı.		-	11	

Average production of March & & Umbria 2,454

This production compared with the po lation of each district gives the follow

Districts.

١	Pesaro Urbino	
l	Average for the Province of Pesaro	
١	Average for the Province of An ona	
l	Average for the Province of An ona	
l	Average for the Province of Macerata	
l	Assoli Piceno.	
l	Average for the Province of Ascoli Piceno	

Average for the Province of Perugia

Average production per head in Marches an Amongst the leading propri tors in rovince we may mention the followi-

he most import out and recommendable Count Zeffitino Faina, Collelungo, Arngia.

Marquis Ugo Spinola, Perugia. Società Enologica, Spoleto. Lamberto Colonna, Amelia. Cav. Giuseppe Bertanzi, Umbertide, Count Eugenio, Faina, Orvieto. Duke Ugo Boncompagai, Feligao. D. Luigi Boncampagui, Lodovisi, (di Castello.

Prince Albani di Castelbarco, Pesarc Cav. Gaetano Monti, Sinigallia.

Count Aurelio Guglielmi, Balleani and Osimo.

Marquis Luciano Horati, Jesi. Possedimenti della Santa Casa, di Lo Unione Enologica, di Ripatransone As

To be continued.

POSTAGE STAMPS.

There are about six thousand diffe descriptions of postage stampa in exist The museum of the Berlin post-office contains between four and five thou specimens, of which half are from En and the remainder divided between Africa, America and Australia. country carries off the palm for al and grotesqueness of artistic design as feriority of execution, we are not told if the collection is faithfully represent the variety of ngliness must be cons able. Some of the stamps, it app bear coats-of-arms, and other emb impartially borrowed from the hea above, the earth beneath, and the w under the earth - stars, eagles, l horses, serpents, railway trains, dolp and other "fearful wild-fowls," are, moreover, the effigies of five Empe eighteen Kings, three Queens, one C Duke, several inferior titled rulers, many Presidents. In so many con and nationalities some really attra specimens must have been eladorated if so, it is a pity our authorities di borrow a hint or two from the bes anything more bald, monotonous commonplace than the British serie postage stamps down to the latest cannot be well imagined.—Puper-Mo Journal.

Jan. 4, 1000

CALIFORNIA WINES.

Heavy Increase in Shipments During the Past Year

The daily papers of San Francisco have summing up the commercial interests of State, devoted considerable space to the ae industry. A summary of the statis s furnished, shows that while the producn of the vineyed- was not so great us d been expected early in the season, the al yield during the past year was 17,000,-0 gallons, an increase of a million galis over the previous year. At the begin ng of the senson the vines, gave evidence producing a very large yield, and in igust it was estimated that the production ould be 21,000,000 gillons. After that, wo yer, the State was visited by two erks of hot weather, followed by rain. ith the result of a shinimution of at least is fourth of the crop. By counties, the collection of wines was as follows: Napa, 000,000 gallovs; Sonoma, 2,500,000, San-Clara and Santa Cruz, 2,000,000; Alaieda and Contra Costa, 1/500,000; Sai, mquin, 300 min, Fresno, 2,200 (60); Los ng les and south, 3,000,000; Sacramento nd north, 4,500,000; other counties, 1,-99,000. Of this amount, at least 4,000, on gallons will be distilled, producing bout 800,000 gallons of brandy. The balnce of 13,000,000 gallons will consist of ry and sweet wines. During the past ear over 7 000,000 gallons have been exported, and there was a home consumpion of five or six million gallons. It will herefore be seen that there is no over pro-Inction at the present time.

The total shipments of wine, the value I which is approximated at 40 cents a gallon, from this city were 7,170,634 galons, and of beauty 428,135 gallons. The shipments in 1887 were, wine 6,991,771, and brandy 472 452 gallons. The heaviest shipments to one port were to New York, where 3,002,568 gallons of wine and brandy were sent. The shipments to the same place in 1887, amounted to 1,688,227 gallons. In 1887, 258,248 gallons were shipped to foreign ports, while the shipments last year increased to 398 879 gallons. The shipments from this city by rail and sea have already appeared in the Meacuast.

Regarding the condition of the vineyards the A'terremarks, that the planting of wine grapes has been very light during the past two or three years, the large increase in the production of wine, which so many have predicted will not occur. With the vines now planted and na bearing, a very large erop in a favorable year would be 25,000, 000 gallons. In all favorable years, with wet seasons, there is always hable to be heavy spring frosts, which cut off the crop considerably in the bay counties. During dry seasons, the vines in the interior counties suffer from sunburn, and the result is that the large crops expected, fall far short, The reason that few wine grapes were planted during the last two years, is due to the low price of fresh grapes and wines. The prices of wine grapes in most counties has averaged from \$8 to \$15 a ton for ordinary kinds, and from \$20 to \$30 for fine varities, such as Cavernates, and Sauterne, The prices of low wine of the '87 vintage, were higher in the early part of the season than in the latter part of the year. In January, dealers were paying from 16 to 20 cents a gallon for good wine. In July the ruling quotations ruled from 12 to 15 cents. When it was discovered that the vintage of '88 would not be a heavy one, | Subscribe for the More name.

prices again arose and deab is are now paying from 18 to 25 cents a gallon for 87 The past two years have been very bard

ones for viticulturists, owing to the low prices of grapes and wines, but the future looks brighter than it has for some true The exports are steadily increasing, and as the planting of vines has comparatively stopped, the consumption will soon exceed the production. When that time comes, vine planting will again be commenced in earnest. Many wine growers have been discouraged, and some are pulling up then vines and planting orchards. By these thoroughly posted on the subject, this is considered an injudicious movement, and viticulturists are advised to let their vines remain if they only clear expuses at the present time. The raisin growers, howver, have been making handsome profits for the past few years, and the result is that a great many thousand acres of rai invarieties have been planted. Many growers in Fresho and adjoining counties are grafting over wine grapes to the Muscat varieties for raisin culture. The table grape inclustry has dourished for the past two years owing to the demand for fresh grapes in Eastern States, good shapping graps bringing from \$30 to \$50 per ton. Owing to the dry season, the table grapes last year were not as large and showy as they were in former times, and the prices realized in the East were not as good as in previous years. Before vintage time, when prices of grapes were very low, the Vitienlinial Commission advised growers to dry then grapes. Those who followed the advice were well satisfied. A few thousand tons of dried grapes were produced and sold at $2\frac{17}{2}$ and 3 $_4$ cents a pound $_{\odot}$ equal to from \$12 to \$20 a ton for fresh grapes. The Commission will send some of these dired wine grapes to France and England to asecrtain their value in those courties, and the prospects of their market. The drying of wine grapes has been so far successful, that it will undoubtedly be carried on to a still greater extent during the present year Vine diseases have caused great havec in

various sections of the State. Phylloxera is still spreading, particularly in countriwhere it has existed for a number of years A new disease has destroyed thousands of acres of vines in the southern part of the State. This disease has buffled all experts and unless checked, it will not be many years before all the vines in South rn California are killed. A report of the appearance of this disease in the northern part of the State has not been confirmed. The northern viticulturists, having been warned are anxiously watching for its appearance. The vines killed by these two diseases will greatly exceed the number planted during ple process, and certainly worth a trial, the just year.

It will be interesting to viticulturists all over the State to know that the Viticultural Commissioners are establishing a wine exchange in Platt's Hall, on Montgomery street. This will be a place where producers and consumers may meet and when strangers in ty sample pure California wines. One department will be devoted to broke is, morehants and producers, and there transactions in wholesale lots will be made. All the wine makers in the State who have will become the headquarters for all the from by the e der. viticulturists in the State.

Ti V loash & Hort of strays A few vancti s of forest trees, notably the to plars and willows, he very easily erown from entings of the wood, and are commonly propagated in this way. The new wood to used for this purpos - that is, the wood of the previous season's growth. It should he out in Nov inher or December, before any extreme cold weather occurs, and dure and settle near the region ing mild weather when there is no frost in when it may be the considered the wood.

Kap fresh by putting it away in sand in the cellar, and work up into cuttings during stormy weather in the wint r . They are made by simply cutting the wood with a sharp knib, into sections of about eight meles in length, then pack away in said. or earth, in shallow beyes so that the upper ide will be exposed to the air. It is pain this way until spring, when the callus forms on the lower end, and they will start more quickly into growth than it cut in spring, just before setting hem in the ground.

In planting them out, it is important that the lower end, should have the earth packed tight against them, and to do this successfully it is necessary, it planting them in the nursery, to open a trench by stak and line, or it in the forest to throw out a spadeful of earth at each place where the cuttings are to bounserted. They should be set deep enough so as to cover up the terminal bud.

V. PROC. UNTINGERSHEIG

A correspondent of the Atlanta () astitution writes. An intelligent physician said to me a few days ago, "I think I can give you a good item," and I replied that I was always on the lookout for ascful information.

He then said that he had studied the subct v ry carefully and was convinced that it would be well for every house to keep its own fire extinguisher, and it could be easily done. It would certainly be invaluable to persons living in the country, and tar r woved even from neighbors. The ductor then told me that he would give me the exact recipe of the solution now used in the fire extinguishers now being offered for sale,

Take twenty pounds of common salt and on pounds of sil ammoniae (muriate of ammonia, to be had of any druggist), and dissolve in seven gallons of water. When disselved it can be bottled and kept in each room in the house, to be used in an emergency. In case of a fire occuring, one or two bottles should be immediately thrown with force into the burning place so as to break them, and the fire will certainly be extinguished. This is an execolingly sim-

. EDRMENTATION OF CIDER,

There are many different ways of the y name formentation, but in any case the ed cought to stand in bug, open cashs, long enough to ferment slightly, so as to cans a considerabl semi to rise to the surface, when it may be skimmed off, and also give into for the so liment to so tile at the bettern leafone anything else is done with it. Nothing is more important than wines ready for consumption and the deal to abstract by natural means, the minute ers will make an exhibit. The exchange particles of pointer that are hild in solu-

> A quite effective way of chansing the culer, and preventing after fermentation, is have to learn of the wonderful trait that to seald it just after it has been slightly Haropeans prize so highly

PLANTING TREES FROM CUTTINGS | termented and settled | Tells this it may or tries a office lippe Lout of the earlies into ing copper katies, at a cor, quantities in old copper still, holding this or your careds, with botto, W. n.dr. is not 1

The born, which has a considerable being produced by the born of t

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Where the quartity of early to be made will not justify the expense of collection the r Is, boings open by leaving from a to mother. Ex

AN ACCOUNTING DEMANDED.

Frederick H. Hausser and M. Coorne, School fer and dules. Lemette, see the deless in the Edge Hill Vineyard Carpany a St. H. Lou, have commented a suit a last limit Duchman, With H. Gratt a G. i. J. Bicknill and Google Kropith, Dave is of the Else Had Company, for the extenting of the recepts and did users his of said company. The plant its also ask that a jud ment for \$19600 ve five of Kroeplin bed chard to be in trust by hi a for the corporation. They also that 2005 shares of the stalk of the corporation issuch to Duchman were result in fraul upon the other stockhold is

Anoth is assument as that a note for stigmo, executed by definition Grattin to Direlaman, is a found on the composation, and the result of a conspirity. The plainttils ask that a meeting of the steckhold bas be call directlet a Bond of Directors, and that they have pulging at against Drachman, Grattan, Buckucli an I kee plant or \$30,840.

CALITORNIA OLIVES

At a mosting of the State Hortzenland Someth in Son Francisco yesterlay, att ntion was call ditora display of olives from John Rock's Nursery, on the Milpitas road, mar this city.

There were Joan speam as of the Macroesrpa, the tru-Picholine, the Lyaria, the Rigidis or Queen, the first that has ver been fruited in the United States, the Pambelier, the Columb Pa, the Mission and Manzanilla, The Pachdine shown was the largest Profes or Hill, and had ver son, and he salthet if that was the trufruit of the variety, how oild with haw all the objections he had ever mid to the olive. He points I out the Manzanilla, appatently larger than the Mission and expressed confidence in (x) diene . The Res gales or Quote is by fir the largest olaever fruit-d in this State. It is twice the siz of the average Mission and symmetrically eggshaped. The specimens ware carefully examined. The evaluation served to show how in a h California he mentionists



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FRIDAY......JANUARY 4, 1889

IN a letter to Mr. Denicke of Fresno, a copy of which is reproduced in this issue of THE MERCHANT, M. J. DeBarth Shorb advises cantion in exercising a hasty judgment in diagnosing outbreaks of disease similar in character to that now prevaleat in the vineyards of Los Augeles. As the writer observes, while at present the trouble is involved in apparently impenetrable mystery, it must eventually large dealings have been reported from give up its secret, and then, a propen remedy will be forthcoming. There is nothing to be gained in this case by jumping at hasty conclusions, and the vineyardist can reat easy in the knowledge that the Viticultural Commission and its agent are using every means in their power to discover the cause of the plague, and to stamp it out.

THE TRAVELING exposition of California products is attracting much interest in its progress Eastward. All along the route, people await its coming, and express much surprise at the novel display amid surroundings of snow and ice. The passing glimpae of mid-summer in the depths of winter, suggests a pleasing day-dream of an earthly paradise, which will undoubtedly start many on a journey West for the much to the desired goal. The officers of the State Board of Trade are to be congratulated in an enterprise which will undoubtedly result in much henefit to the States

On and after the first of the year, our valuable Eastern contemporary, the Vineyardist, will appear with a change of makeup and form. The paper will be enlarged to the extent of eight additional columns, and will be conducted as a grape, fruit and wine journal. We are pleased to see this sign of prosperity in a paper which has at all times been carefully edited in the interests of grape-growers, and trust that in the fature as in the past, it will become the liberal support of all identified with the various branches of the industry.

THE WINE Exchange will open about the middle of the mouth. The interior fittings which are nearly finished, are elegantly adapted for the convenience of visitors and exhibitors.

THE FOLLOWING SUMMARY of the latest information received from the wine-growing districts of Europe is obtained from Bonfort's Circular:

This year's Portuguese vintage is inferior in the south of the Kingdom to that of 1887. both in color and alcoholic strength, owing to the terrible diseases that have visited our vines and, to some extent, to the incessant rains that preceded the gathering of the grapes, as well as to the unpropitious climatic conditions during its progress. The wine is light and lacks character. There are exceptions, however, some vineyards having been better taken care of, and the vine diseases persistently battled against as soon as they appeared. The wine there obtained is in consequence relatively good and sells at a correspondingly high rate.

The Italian Government vintage report reads as follows: "The yield was bountiful in Tuscany, in the marshes and Umbria; slightly below the average in Liguria and the Venetian and Neapolitan regions; small in Sicily, Emilia and Piedmont, and smaller still in Lombardy. The quality is generally merchantable. The total product falls little short of 30,000,000 heetolitres, and therefore constitutes but six sevenths of an average crop."

The amount of wine harvested all over the Spanish Peniusula this year is large, it is true, but thoroughly satisfactory; darkcolored wines are scarce, and there will be a large demand for them during the campaiga. They are pretty sure to rule high after a while, certainly much higher than at present, in anticipation of which both Aragon and the Rioja iu wines of the class named.

Advices from nearly all the German wineproducing districts indicate that the result of the vintage is unsatisfactory, both as regards the size and the quality of the yield. At the same time the stock of merchantable wines of former vintages is reduced, a fact which prevents business in domestic growths at the comparatively high rates at which such wines are held

In point of size this year's Hungarian vintage falls far below that of 1887, while the quality is not much inferior to it, owing to the uninterraptedly sunny weather during September, fully maturing the grapes.

Proprietors in Algeria are low-spirited, there being no demand except at a notable reduction.

A BILL will be presented to the present Legislature providing for a reduction of State and County taxes on orchards and vineyards throughout California. This is a sensible measure and one it is to be hoped will become a law. It is simply preposterous to assess young plantations as improvements. They are unproductive and, consequently, unprofitable to the planter, who ought certainly to be entitled to some consideration, owing to the additional expense involved in caltivating the trees and vines up to a bearing age, together with the fact that his risks are great, while his profits are doubtful.

According to geographical computations the minimum age of the earth since the formations of the primitive soils is 21,000. 000 years, allowing 6,700,000 years for the primordial formation, 6,400,000 years for the primary age, 2,300,000 years for the secondary age, 400,000 years for the terauce of man upon the globe,

THE VINE DISEASE,

Vineyardists Requested to Report Any Appearance in Their District,

Sin:-The widespread damage done to vineyards in the southern part of California by the disease pronounced peculiar to that section has alarmed all grape-growers to the danger of its becoming general throughout the State, I am, therefore, instructed to institute a special inquiry to determine if possible all localiti s and counties wherein the disease has made its

Commissioner J. De Barth Shorb has been appointed a special committee to investigate the disease in southern California, and under his direction a noted scientist and specialist, Prof. E. Dowlen, has been employed to identify the disease if possible, and to report to this Board on its nature and extent. This study is being earnestly prosceated at present at Sau Gabriel, where a conservatory has been erected to favor the work and make summer conditions available for observation throughout the winter and spring.

We are at present unable to specify the cause of the dying out of the vines, but the presence of the disease elsewhere may be indicated by a comparison of specimens with those vines already observed as saffering or dead.

You are, therefore, requested to report to me as early as possible anything in the nature of disease similar to the following described, and, if possible, you will please forward by express one of the diseased vines or the canes cut from such vines. These to be used for microscopic examination and comparison with similar specimens from vineyards known to be suff ring from the malady.

The presence of the evil is most commonly characterized by a general turning yellow and dropping off of the leaves of the vines in the spring after they have acquired a growth of from one to three feet. In this manner groups of vines, or vines in spots, throughout the vineyard succumb without apparent cause, the root continuing fresh and sappy after the upper part is dead. Other vines dying from the same cause may appear healthy and vigorous until the berries are well-formed or halfgrown and the caues then gradually wither back and die from the tops or ends. The roots may continue living till the following spring or even longer, but they finally die

Many have likened the vines dying from this cause to those suffering from the attacks of phylloxera. In fact the stunted growth of the vines is in both cases strikingly similar at some stages of their development. And to those familiar with the attacks of the phytloxers this knowledge may be of assistance in finding the new disease-

Agsin, the drouth and drying winds of the last summer produced in many places the same apparent results as are to be found in the presence of the new disease, viz: the early withering aud dropping off of the leaves and the drying up of the partly grown fruit This fact renders the work of finding the disease more difficult, and also provides additional opportunity for its escaping notice.

Any doubtful vines, therefore, should be carefully studied and examined, and if after such examination you are still uncertain, tiary age, and 100,000 since the appear- specimens should be taken and forwarded to this office for identification.

In some places certain varieties have seemed partially resistant-so much so as to induce their owners to believe they were reliably resistant. In general experience, however, no variety has held out satisfactorily, nor even enough so as to warrant the hope of relief from this source.

For some time it was thought that only those vineyards planted on light, sandy soils would go before the disease, but the assumption was incorrect as proved by the recent dying of vines growing on heavy soils. Even the wild vines found in the canyons have succombed in many places.

The work thus far performed by Prof. Dowlen has been of a purely to chinical na_ ture, and his reports on the subjet are, therefore, not included in this circular. If, however, there are any whom this may reach who have facilities for making a mieroscopic examination and study of the specimens they find, I shall be pleased to send them directions for the work and the printed reports of Prof. Dowlen up to the Send all vines or specimens by express

iddressed to Viticultural Hall, 216 Montgomery street. Very respectfully.

J. H. WREELER Chief Executive Viticultural Officer.

In France it is too early to speak positively of the Burgundies; all that we know is that leading growths have an unobi ctionable flavor and fine color, and that owners found great hopes on them. The yield has been bountiful, and the trade will find a good average quality, suitable for meeting all requirements. Although the yield in the southern vineyards has been large, not much activity has so far been displayed in securing them, the asking price being too high. The viutage in the Champagne has proved a failure, notwithstanding which the new wines were all sold in a couple of days at higher figures than last year.

San Francisco, January 1, 1889.

The Bradstreet Mercantile Agency reports 851 failures in the Pacific Coast States and Territories for the year 1888. with assets \$1,611,098, and liabilities 8,-454,233, as compared with 681 for the previous year, with asets \$6,074,171, and liabilities \$18,091,146, which included \$3,985,-259 assets, and \$13,635,469 liabilities for the failures of John Rosenfeld and Wm. Dresbach, grain dealers,

The failures for the past year are divided among the States and Territories as fol-

State,	No.	Assets,	Liabilities.
California	625	\$3,884,411	\$6,979,290
Oregon	144	461,832	976,700
Washington		235,655	427,143
Nevada	. 7	8,950	28,450
Arizona Ter	13	17,300	42,650
Total	W51	\$1.611.098	98 154 933

One of the most remarkable salt formations on the globe is located on the Island Petit Ause, off the southwestern coast of Louisiana. The deposit is pure crystar salt. There are at least one hundred and fifty acres of unknown depth, explored one hundred and forty feet down, and covered with earth from ten to twenty-three feet in depth. On the top of the salt, beneath the earth, have been found the remains of the mastodon, mammoth sloth, horse, tuska and hones, interspersed with Iudian relics. Above the salt is a deposit of pink sandatone and a coal formation.

DON'T BE RASH

Mr. M. Dinbeke, Person,

DEAR Sin: - A communication from you on "The grape root disease in some Las Ang les vin yurds" appears in the D centher 21st issue of the San Prevencesco Men-

As the information that in conveyed is rather positive in its character, and will doubtless he read by more deeply interested. renders, some who unharpaly have affected vines and others who fear they will have in the near future, and who may proceed promptly to earry out "the only enre" as suggested in your communication, viz othe thorough aprioting of all infet di vin s," it has occurred to me that possibly an answer from me through the same joirnal, making at thir by as public as possible, so as to rach the largest number of readers, might not be out of place at this time. In fact anything that in ght induce friction of ileas, which would tend to bring forward statements of facts or alb god facts in support of ideas or opinions evil only be productive of gool.

You start out in your communication by stating "the grape-root diseas in some Los Angeles vineyards is called the graperoot mould in Europe." If the discuss above allu 1-1 to is the see all 1 " grape. root mould of Europe" may I ask by what authority it has been so disignated? What scientist or practical vin sgrew r has identified this disease as the specified graperoot mould of Europe ?

Infected vin yards in Lis Augeles county wer visited by Professors F Lamson Seribaer, " Cho f of the S ction of Vegetable Pathology" of the D partia at of Agricultur, and Prirre Viala, Professor of Viticulture in the Xational School of Agriculture at Montp Iter, France, and neither of these distinguished scientists were able to name the disease or determine its character. Your language would convey the idea that "the grap or set mould" is common to Europe, and I present is known by that name, or by some other name in the diff rent languages in ming the sum . May I ask in what ving district this dis is has made its appearance, and what author or scientist esp erally treats of it, or gives the history of it?

Surely Prof. Viala should know this disease; and is it not curious that he should not have been able to a lentify it here, if it really exists? You speak of "the mould spores reaching out through the ground for fresh nonrishment". The spores of fungi do not travel; the miveclium of the forigus can reach to some distance through the ground by schding out its branching filaments, and these may produce spores at or near their extremities. C rtain spores are locomotive to a c rtain extent, i. e., they mov - for a limited time when in a fluid by mans of cilia. For argament sake, however, assuming your theory is correct, and that the deadily spores of this dis ase are lolged in the grant, is it not curious, then, that the roots are not first affected and through them enteriote the circulation of the plant? Microscopic examinations of hadly diseased vin s in the cery list staps of the diseas have full I to reveal such abnormal condition as to in any way account for the general decay. Your name for this disease would in itself indicate that it is a disease of the roots and not of the leaves and branch s. Nothing in our examination has been seen to at all justify this assumption; but, on the contrary, all | gallon.

our study points in the direction of the blives, as the point of attack, and thes opinion is shared by nearly all whether given careful study to it.

A publication will storally be as unduly the Viticultural Commission shows g what the investigation und rick is by it his ivealed so far, and from its careful study any close or careful observer will be able to d termine for hims If whether his vines are affected by the same discussion not.

Having been charged with their spensi fality of this any sugation by the State Viticultural Commission, I should be very glad to be assisted in this wars by enven who has any information to import or firstto disclose, We want all the light obtain able. In conclusion, addressing myself to all the people of this State, I would cutnestly advise great caution to histy pulz in lits or opinious climatiting from a went of a thorough, knowledge of the facts, and before careful examinations and stulis have been made. The discast, whatever it may be, while now pr s uting apparently an imponetrable mystery, most soon give up its secot, and then thech must and laboratory will soon supply the rem dy.

Very respectfully yours,

J. DE BYELL SHORE S in trab 3c', Ca γ , 10 comb τ 26, 1888,

P. S. Agentleman in this county who has sufficed very sever by from the revages of this dis as , and who has studied it for the past three years in his own vineyards, has nee ntly been to Tresno and reports that after an examination made there he is convine d that your vin yards are similarly affected as ours.

If you will send branches of any yourand I av s, even withered ones, of the disused vines, and so protect data not to be broken up in termst, we can easily make an examination of the same and a port the results.

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Sun Dri d Grapes, Steadess, sles, Unsterning Lysks,

Sugar Quotations

California Sugar II fin ry prio list dated January 31, Circl. A. Pat. Cub., 7. Circle A Crushed, 7., v. Pine Crushed, 7. Extra Powdered, 7 . Dry Granulat d. 7c, Confectioners' Circle A, 6%. Extra C 5° or, Gold n. C. 5° or, Star Drips Syrup, in bbls, 171, % bf db, 200, 5 gall keps, 25c; I gill this, 35c per gill on.

Price list of the American Sug a R fin ry held January 31 Lytra for Cubs, in bbls, 7% . Circl A. Caish J. 7 . . Pine Crushed, 7%, Powd red 7 co. Extra Pine proximate accuracy. Alter's proxi-Powder 4,7 pt. Dry Granulat J, XX 7 pt. Dry Granulated, 7c, Confectioners Carel A, 67, e. Latra C, 57, e; Gold in C, 5/2 . Son D. 20 county, which will be a resis-American Golden Syrup, in blds, 20c per

THE WISE EXCHANGE

Sing Tample of Literate the S. Francis - Mencusya (Nov. 2019) as Wine Lix Land Care do at to $\operatorname{Lisher}_{G}(\operatorname{in}(\mathbf{S})\operatorname{in}(\mathbf{F}_{1})\operatorname{dietse}) = (\mathbf{F}_{1}^{1})_{G}(\mathbf{I}_{1},\mathbf{I}_{2},\mathbf{I}_{3})$ not, on the plan proposal as Lorentz if sustained by the best of as a fine of the first and of what said of the sai will as I from the section 1. Son I at ersed, will had I think, to a it tooth other has eite-Lamisters that if such an exclusand under the control of the Sar Time . Wine Pyching. As ociation at world 1. to a very great meres. In term the establishmen wines, and its a very bor form.

There are several places in Bost walk is California win s ein b. U. i. hi, leit th. i. is no place where they can't be imported and t sted as they can be at the Sac. erses "Wine Txching," By the orload the cate, or lim harmon, has had a resons have would soon test Cold in a win who is y this not exhibit them Board of the Linch wire and abactly feed I hope that in a value of the p proposed, may soon be established in car lead on a common army. Lat, being that the larger to som the Atlantic's alward.

Will it not be will for your whiledealers to any empourar uniform sizstyle of bottle for the duff i of km l-

We usually count fix 1 t. s trith lon, and I think that it will I sail to the bodd's of a siz, which will a rabo part the roof. A surs respectively.

Cynthe Valley equilable Miss., It is 6, 1.55

IN TAXOR OF WINE

Drys Mr - Press - 1 bolt v the or savi tion of the grape and the many better pur matry we in all a confry, we have the best practical mass of vari time temperates. The probability was why temperates in usur slave that I was us is that the continuous as and a not on conserve of the people will not a low the indiscription decoration at resolution is that contain alcohol. The desirieties, that per measures that will provision see the separate less of to defor the poor, thi. If the apendix wines of it is the place of distilled liquors as a beyond, the conselof temperane, would mark its an at st advance. I trust the day will me when this charge with achieval,

A ous viry traffy, Ho var C D 9, 1888.

SAN DILGO'S RAISIN CROP

The S Says San Dr. C. w. stablish a record as a taisin and the drying-season is about end 1, and to pr has so far groups as dethat estinototal output can be made with social diminal than widely a conearlieds of our fromus to expect t of over \$250,000. The firms army did are from ear fil estillant a mail by the

wers them dy's, and from figures comprisibly it, rail of managers who have the contracts for carrying the fruit. These figures show til Capacito be in the foul, sul. the Lee whele district following, and at I get Say taker coming next.

Points. 2300.000

150 000 S 000 000

The state when they become generally a cent was pedably cars, some surprise non-confident the increase over last year, It may be as a planted, he wever, by the not that the vines planted one, two and three years agonat just coming into full

or a list viry has been made accommentation with the vine disease now the sulpot of investigation at Los Angeles, thing the work a part of diseased -per sus baward of from Semonia county, by I i upon expanded in by Professor How ... the intricing fact, that the featit's its jut the same as have been touch on specimes tak in from affected vines in the south rupo from of the State, things in whice reattributable to the

A regard in this information Chief Viti and all Officer War for his notifications variets in all portions of the State and reis storth but of a war lite the office of the some peach in this city for examination son possibility is appropriate on The pales does in this issue for Mr 2008, of the different reports of area of the about will present of invaluable a type in Attraining the diseas, and cy to hove terms can be easily deter-, apple done to the offic of the

GRAPES IN PERSON

int and obsirving tray for Notice a grapes are grown anywhere and by I as a saying a dhing of peaches, in is fillers, and at riftuits. In some hop, that the people head them to their to see a blook year On certain vart ties to see a grapes horses are said to thirty. have all in bod for a white. If a several the rath was they also furnione of the ry estimate on the roads ale a carry its of donk ys and mules, and som times of a diels, laden entir ly with $\epsilon_{\rm T} \sim 1 \, {\rm h} \, {\rm y} \, {\rm ar}$, anying the grap's from a same yard to the cities for making Contain's syards, or districts, are $\langle a\rangle$, for the $\langle v\rangle$ is not of their wine 1 - and in grap's from these particuvia list in a nonlines carried to citleft at several days point yet. The a coapes a same viney ords tour day's on a com State, and at so highly vala record backing that there is no end the cry and merrials among the Shnaz notes to obtain them. The grapes are A 1 m pathi r biskets called lodalis, at the holds mywhere from 100 to 300 pendeces upos, two of the baser siz hand and amy load, and the larger a cam-

Sub- 11 I the Menchani

OUR NATIVE WINE SHIPMENTS BYSEA.

PER P. M. S. S. CO'S STEAMER SAN JUAN, DEC. 22, 1888.

TO	3,777,777	YORK

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., 3,116	
3,332	181
25	
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TO CENTRAL AMERICA

CO. Puntas Arenas Montealegre & Co 2 kegs Winc	30	831
B E, La Libertad Cabrera, Roma & Co. 51 kegs Wine	612	155
AM, Corinto Napa Valley Wine Co. 3 barrels Wine	156	7
7 kegs Wine	70	4.1
I M N, La Union Eng de Sabla & Co 12 cases Wine		
1 barrel Wine	51 (56
A. Corinto J Gundlach & Co I barrel Wine .	17	20
r half barrel W	ne 26	1:
14 kegs Wine.	70	47
R. Guatamala Hellman Bros & Co 20 cases Wine		51
M. Corinto John F Wright I kegs Wine		21
I D. Acajutla		211
17, Acaptela 15 kees Wine		125
M. M. La Libertad " 12 cases Wine		44
HC, Puntas Arenas Castle Bros 20 kegs Wine .	2:40	188
J A, Cornito B Dreyfus & Co barrels Wine.		
	ne 250 j	530
loo lucardes at		- 55
Total amount of Wine, 12 cases and	1.959	\$2,060

TO MEXICO.

E.L., Acapulco Reddington & Co. 1 barrel Wine R.A., Acapulco J.O. Meyerink 2 barrels Wine	12 80	\$74 80
Total amount of Wine	122	8151

MISCELLANEOUS SHIPMENTS.

DESTINATION.	\F5SFL	RIG.	GALLONS.	VALUE,
Honolulu	Walla Walla J D Spreektls Gaehe Cleone Rosani	Brig Steamer	GU	\$272 \$75 16 2,410 50
Total			7,908	\$3,623
Total shipments by Far Total Miscellaneous shi	pania steamers		4 gallons	\$6,921 3,623

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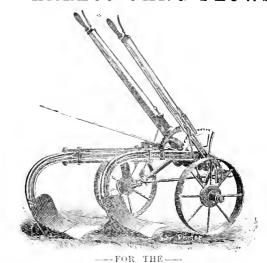
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D. J. SIAULES, President, WM, J. DI TTON, S. r tary, ALPHEUS BULL, View-Pr siden B. FAYMONVILLE, Asst. Scretary.

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FRUIT TREES. 300,000

of 1888 see a lage and very thing to assertment a FRUIT TREES grown absolutely without irrigation.

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the realist substitutes to ape Vine

LARGE STOCK OF OLIVE TREES, ALL SIZES, JAPANESE TRIES AND SHRUBS IN GREAT VARIETY,

Correspondence Respectfully Substited

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SAN FRANCISCO.

A DARK SIDE OF LIFE.

of the Sydney (N. S. W.) Bulletin:

Had the victims of the Whitechapel murters belonged to the superior classes the whole resources of England would have oven pledged to avenge them. As it is, as hey belonged to that great army of starvaion which so ks in daily infamy the means f daily bread, the Home Office is tranquilly passive and the Treasury is quietly inacessible. The city police authorities are roused and the people of the metropolis re indignant; but Government, always Conservative in administration, no matter the may be in office, sees no reason for ction. Yet in the bare fact that such lives re possible, lies an indictment which hould make the official world tremble and ffright the superior people officialism repesents. For these outcast women who ave been slaughtered in the purlious of a ily of palaces, are not the only sterific s London's greatness. Her growth is namured with the blood of the wretched. nd the roots of her prosperity are mulched ith crushed humanity. Officialism tries trample misery out of sight, and wealth evotes to the attempt to hide it much of he means which should be used for its Heviation. There is a conspiracy to keep invisible, which few travelers penetrate nd many residents never suspect. Guard he squares, and the police, with a continual move on," chevy it from the highways, nd well-paid sentries beat it back when attempts to excite sympathy and implore ssistance. When you, the Australian visi or to London, turn into one of Spiers and 'ond's big London restaurants, do you ever very at the door? They are to prevent he famine-struck beggars from besecching our well-fed Lordship to give him a penny hen you contemplate reviving yourself ith a meal: to drive him off when he tries peer through the plategless at your pleny, lest his wolfish eyes and famished face hould spoil your appetite and limit your spenditure. Do you know why lofty gates uclose the sonares and streets and terraces clong to the famous Sir Henry Doughty ichborne, to Lord Portman or the Dake f Portland? It is to k ep the scores of azarus from the sight of Dives that those ates arise. Did you ever would r why the urdy polic, men breaks his stately guit ow and then to dodge and dash after the it-lik - ragamuffians that seuffl and scuttle way down by-ways and back lanes at his pproach? It is to keep them out of sight, nat's all; to drive them to such a distance rat their rags shall not come b tween the ind and your nobility. There are a quarer of a million of paupers in London in hom the official dole barely keeps the reath of life alive. There are 300,000 peo-

from beneath this substructure is squeezed the human refuse upon which the White-The following vivid pen picture of the sad chapel murderer or murderers have played conditions of life, which through miserable on that horder line which separates a life surroundings, breed and foster the darkest their f-rocious tricks. These were not rimes, is reproduced from a recent issue gilded Traviatas, splendid in velvet and shining with jewels. No! The last poor, murder d wreich was identified by the pawn-ticket of her protector's undershirt found upon her person. He, poor brute. had pawned his boots to buy the last meal they had shared together, and she had sallied out to seek in sin the means of their next repust. In sin! Whose is the sin? Is it the sin of poverty clutching at existence, or of wealth living by the premeditated creation of miscry? As the Faubourg St. G. rmain a medical itself moon Versailles so, some day will horrible London empty itself upon the West End. Then, when fair women find scant mercy, and gentle heads are bowed in blood, some daughter of the people will speak in the vengeful spirit of Ther se Deferge: - "We have seen these things done to our women, we mothers and wives and sisters of the poor, and no one heed dour mis 1y. Why should not your wom n saff r, and why should we head your downfall? What is your vretchedness mere than ours?"

A POINT FOR ORCHARDISTS

The New York Tribum suggests, that when making a personal examination of your fruit trees and orchards, the ends of the shoots over the top of the tree should be carefully inspected, for the purpose of d gates and portly beadles shut it from ascertaining its condition. If you find a season's new growth is less than six inches on a bearing tree, or less than twelve inches on a young tree not in bearing, you may at once arrive at the conclusion that the tree or trees, need more and better cultivation, If tall grass, or rank plants or weeds have been allowed to grow within the swe prof uess why those gigantic servants stand in its branches, or even two or three feet beyoud, the cutire suppression of thise will in most cases prove sufficient. If no such growth interferes, your soil needs manure. You may find that there is some injury to the collar or stem which impedes circulation, it so, the above measures will be of no avail. Under ordinary circumstances such a tree is doom d nules, there is some strong sprout direct from the roots which can be formed into a new stem for a new nat call the Duke of B dford owner; that tree. It must be said in this connection that ov. r-vigorous growth, or growth continued so late as not to tolly ripen before the frost comes, if your section is subject to frost, is a dang r and should be guarded against, Cultivation should begin with growth, and be discontinued in August or early S ptember. Fertiliz rs or manures, which are v ry beneficial, should be applied in the fall or winter.

THE DISCOVERY OF CHAMPAGNE.

The discovery of champagne wine is said to be due to a B. nedictine monk named Perignon. In the year 1665 he was made cellarer, and, in pursuing the daties of his le out of work in London who never know (quosition, he hat upon the id-a of "marrying" here their next meal will come from, nor the different wines produced in the vinethere they will lay their heads at night, yards around him. One sort he had here are two millions of men, wom n and noticed imparted fragrance, another generhildren in London whose utmost struggles osity, and the blackest grapes were found arely buy them food enough to keep them to produce a white wine that kept good, f continual starvation from d.ath by instead of turning yellow and degenerating, namufacturers engineered by sweaters; and trict, Hautvillers, most famous of all. He 572, and in 1887, 17,091,551. The area is no one who cannot read and write.

was also the discoverer of the fact that the [120,832] square miles. For the ten years, old stopper, a piece of flax dipped in oil, 1878-1887, the number of emigrants from could be advantageously replaced by a piece of cork. By dint of experiment after or only 355,000 less than the whole regisexperiment, he finally evolved the eff ryescing wine that was far pleasanter to the taste and far more exhibitating than the old style still wine. The King gave the scal of his royal approval to the new discovery, and the courtiers were not far 1hind in recognizing the virtues of the new

The Marquis de Sillery at a souper d. Anet introduced the wine into the court circle. "The flower-wreathed bottles which, at a given signal, a dozen blooming damsels, drap d in the guise of Bacchanals, placed upon the table, were hailed with rapture, and thenceforth sparkling wine was an indispensable adjunct to all the petits seopers of the period.

ANUTENT ORANGE TREES.

There is still thourishing in the porch of the convent of Santa Sabina, in $\mathrm{Rom}_{\mathrm{c}}$, an orange tree that is said to have been planted, A. D. 1200. Another, in the monastery of Toudi, is supposed to have been planted by St. Thomas Aquinas in 1275. In th Moorish Aleazar of Seville, Spain, exists one that was planted daring the reign of Pedro I, between 1150 and 1266. Others known to be 310 years old, has a height of fifty feet, with tranks five feet in encumference. Age is not, however, indicat d by size, as in Andalusia, there are many young r, that are considerably larger than these. I (Alcala de Guadeira are two, th trunks of which at four feet above the ground, are respectively seven and eight feet in circumference. The yield of some orange trees in Malta and Naples is simple astounding, reaching as high as 30,000 oranges to the tree, and on the estate known as the Huerta Grand , in Mairena del Alcor, there are two that are said to have borne 35,000 oranges each in a scason-

ITALIAN ENIGRATION.

The Anglo American Times says: "Many writers treating the subject of Italian emigration, assume that it presents quite abnormal proportions. There is nothing to justify this assumption. When the Kingdom o I aly was definitely constituted in 1861, without the territory around the City of Rome, the population amounted according to the Almanach de Gother to 21,725,-520. The same authority gives the namber of persons then actually under the dominion of the Pope as 690,000; so that the people of Italy numbered, in that year, all told, 22,418, 529. The total area of the king-lom is 114,410 square miles. Emigration began to assume noticeable proportions about the year 1875, and the total number of emigrants registered in the thirteen years, 1875-1887, was 1,705,435. Of these, 800,-000, or nearly half, passed into European countries, the rest going beyond sea. In 1871 the population of the kingdom was found to be 26,891,154. In 1881 it had increased to 23,459,628, and at the end of 1886 it mounted to 29,943,607. The average yearly emigration, therefore, was less than half the natural increase in population, for it must be remembered that there is no immigration into Italy. How do amine outright. Upon this great sub-rus did the wine made from white grapes, these figures compare with those for Great tructure of misery are founded the fortunes. This white or gray wine of Champagne be- Britain and Ireland? The population of I free trade commerce and unprotected came famous, and the wine from his dis- the United kingdom was, in 1878, 33,730,-

Great Britain and Ireland was 3,095,868, ter d increase of population for the same period. This apparently stationary condidition is partly explained by the fact that there is a steady reduction in Ireland, amounting, in the ten years, to more than 400,000 persons; but the evidence is overwho liming that the emigration from the United kingdom is not only actually, but relatively, vastly greater than that from Italy. The British population increased at the rate of 330,000 a year; the Italian, for the ten years, 1871-1881, at the rate of 165,000, and for the five years, 1882-1886, at the rate of 296,000 a year. So far as a growing populati a implies national vitality, Italy is surely holding her ground." ***

LIVERMORE WINES.

Clarence J. Wetmore, who has made considerable inquiry among our wine makers, estimates the amount of wine made in the Livermore District, this season, at 500,000 gillons. This amount, he states, is nearly buble that of last season's product, which he places below 300,000 gallons. Mr. Wetmore's figures would give a crop of about 4,000 tons of grapes-just about the estimate mad before the hot spell, which did so much injury to foliage and fruit. At twenty cents a gallon, this wine would be worth \$100,000. It is probable that it will bring an average of that price.

AN OPOSSUM FARM IN TRESNO

The Mete d Express is authority for the statem at that Fresno is to have an opossum farm. Jessie Irwin, a prominent citizen of that place, has just returned from Pike county, Mo., with a carload of these animals. The ranch is to be fenced in with an old fashioned rail fence, covered with the gourd vine, and each piece of the fence is to have a hollow log. He is going to plant twenty acres to persimmons and the same number of acres to blackhawks, and his sweet potato patch will be the largest in Fresno county. In due course of time are expected encouraging reports from Mr. Irwin's enterprise.

TAR WATER.

It is claimed that tar-water is a cheap and effective remedy for insect pests. It is prepared by placing a quart or two of coal far in a tub or barrel, and then filling up with water. In about 48 hours the water will small strong of tar, when it may be dipped off and applied to plants with a syringe or common watering pot. It will not kill the larvæ of the potato heetle as has been claimed, neither will it prevent the females from laying their eggs on the leaves. It has no appreciable eff ct on squash bugs. nor the larva of the imported elm tree leafb. etle, but it is death to the cabbage hutter! fly, (Pieris rapue.)

STATISTICS collected in Germany, show that in Roumania, Servia and Russia about 50 per cent of the inhabitants are unable to read and write; in Spain, 63 per cent; Italy, 48 per cent; Hungary, 43 per cent; Austria, 39 per cent: Ireland, 21 per cent; France and Belgium, 15 per cent; England, 13 per cent: Holland, 10 per cent; United States (white population), 8 per cent; Scotand, 7 per cent; Switzerland, 2.5 per cent; and in the whole German Empire, 1 per cent; while in Sweden, Denmark, Bavaria, Baden and Wartemburg there is practically

THE RIGHT VOLTOR WINES

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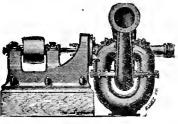
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HINTS ON GRAPE CLLTERY

The propagation of the vine, writes an anthority, properly belongs to nurserymen or those skilled in growing plants. The cuttings may have one or two eyes, in either case they should be set in the ground so that the upper eye is busely above the surface. They should be set out in early spring before the buds commence swelling. They may be set either perpendienlar or inclined, at from twelve to eighteen inches apart at right angles, and should remain our year in the bad before setting out. In setting out grape vines, thorough preparation of the soil will insursuccess, while carcless in thods will be attended with disappointment. Large holes, say three feet in dram ter and twelve to fifteen inches deep, should be dug, with the vine set in the middle, and rich soil, in which ashes and leaf mord are well mixed, carefully packed around the ${f roots}_i$ which should be so spread that each one will be allowed to do its duty. As soon as the vine begins to grow, ride off all shoots but the strongest and most vigorous Train this to stake the first year. Then are several systems of training vines, viz to a stake, trellis, or arbor. The stake plan admits of severe pruning, with a strong main vine. What is known as the removal system can be successfully practiced on this plan, which in any occasional renewal of the main vib , and allowing a new shoot near the ground, taking the place of the parent stem. This new word, it is thought, insures a more vigorous and healthy growth, hesides producing larger and finer fruit. The trellis system is run with wires stretched on posts and the vines are trained on the horizontal plan, with arms at first, and from these perpendicular shoots; skillful and regular pruning is required, and if thorough culture is given satisfactory results will follow. Both plans have their advocates, and succeed altk of carried out. The stake system is well adapted to field culture, where it is convenient to plow in two or more directions, while the trellis plan allows of plowing in but one direction, Cultivators differ materially in the methods of pruning, and dotails in this short article would not be possible; suffice it to say, that on general principles not more than two to four eyes

A.0 If vine, vigor of growth and variety, hav much to do with pruning. Sovere pruring is soldom practic d by beginners, who want, as they think, as much fruit as possible. Now wood of the present year's growth produces the fruit. R moval of n w growth by pinching off, thus restraining, if possible, too much growth of wood, is practical with good off of during the growing season. Go slow, however, and experi ment contionsly. Always avoid enting off long to to his when in full leaf or vigor of greath, is too great a shock to the vinwill is sult from such practice. . . .

EXPERIENCE BRINGS WISDOM

The Lavermore Her Od says. The experis need of the present is ason has taught our wite clowers a number of things. Among others, is the fact that in years of excessive heat and dryness, some varieties of vines will be burned, both leaves and fruit, while others will remain uninjured. The varietic boat are in number greatly in the minority, but in quantity planted, they in this valley play a very important part. These most inpured are the Zinfandel, the three Brislings, and the Burger. Those om what hurt are the Grenache, Tolle Blanche (only injured on light, dry soils Plane Tokay, Black Hamburg, and on dry soils the Muscut and Rose of Peru. Many of the most valuable wine grapes, including nearly all the high types, are uninjured. So are such fine bearers as the Mataro, Caristan, Rose Chasselas, Colombar, tiolden Chasselas, Charbono, Malvoisi and Petit Pinot, Among table varieties we find the Black Morocco to stand the heat lest, with the Rose of Peru a good second. If the Malvoisic can be ranked as a table grape, it will be placed beside the Morocco-The Direk Ferara is but slightly injured. except on very gravelly soil the Rose of I'm is the most vigorous grower and heavi st bearer of all. The Morocco has the largest berry, and seems to be particularly adapted to this valley. It delights in rich, loanry soils. We should study closely the effect of this season upon our varieties of grapes, in order that intelligent grafting may improve our vineyards and enable us to avoid the losses of a season like the present.

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Description of the Blueberry.

The Blueberry is a valuable fruit, and is a reliable fruit to grow in our northern The Blueterry is a valuable fruit, and is a reliable fruit to grow in our northern States where the more tonder varieties of fruits winter-kill. It is perfectly hardy, having smool 40 degrees below zero without showing any injury to the most tender buds. It ripens in this latitud, about the 1st of July, and is borne in clusters like enriants; shape, round; real-dish purple at first, but becomes a bluish black when fully ripened. The flavor is equal to the raspberry, a very unid, rich sub-acid, pronounced by most people delicious. It may be served with sugar and cream or cooked sauce, and is sub-adid for winter use. The older serves to flavorship and scale and is a real-file hourse. people delicious. It may be sarved with sugar and cream or cooked sauce, and is splendid for winter use. The plant so has to flourish in ad soils, and is a profife bearer. It grows very stocky and makes a nice hedge. The shimming dark green leaves and the blue fruit making a pleasing centrast. The demand for the fruit is great, and usually brings 15 cents per quart. They commence bearing the first year after setting out, and yields a full crop the second and third year after setting out. They are propagated from suckers and rose cuttings. The plant is about the height and size of the currant bush, and very stocky, holding the fruit we hap from the ground. Plants should be set in the fall and spring, in rows two or three feet apart, and five or six feet between the rows, making a perfect hedge, and no grass or weeds should be allowed to grow between PRICE LIST

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imperfect ferm nation or from the in-it stringthens and develops their natural color and aroma, preparing and assisting them for thorough clarification, promoting their development and improvement in quality and aroma, and repealing them for earlier delivery.

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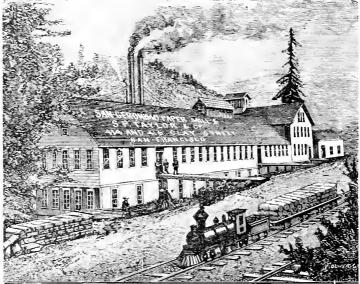
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VOL. XXI, XO. 9.

SAN FRANCISCO, JANUARY 18, 1889.

PRICE 15 CENTS

ITALIAN VITICULTURE.

CLETIVATION AND PRODUCTION OF THE VINE, WITH CHARACTER-INCICS OF WINES.

An Interesting Account of the Wine Industry, furnished by the Gen-.oral Ballan Wine Gravers Association.

> [Continue! from page 11%] . TUSCANY.

Tuscany is the most famous region of Italy for R d Table Wines, of a kind that are dry and early digested.

The largest quantity of Tuscan wine is propared by mixing 7 lb of Sangiovesgrapes with 1-10 Camij do and 1-10 white Malvasia or Trebbiano grapes; but for wines which it is desired to keep for a long period, an addition of the per cent. or fifteen per cent, of Bord-aux grapes is recommend I, because by doing this, very notable results as to flavor and bought are obtained, the wines being similar to thos of Bord-aux.

Owing to the fine quality's of the Tuscan wines, they were very rapidly diffused as the construction of railways progressed. The system of cultivation was also improved, and to that already priviling, and known as to-stucchi, which consists of training the vines on wooden supports in the shape of a cup, large numbers of vines regularly trained and custivited on trellis work were added. In the fields where the vine culture was associated with that of herbaceous crops, the vine is now trained on double or single aspallers.

Other reasons for the improvement of Tuscan win's might be found in the iner using proportion of good varieties of grapes, and in the extension of the vine cultur on the hills.

The exportation and consumption of Tuscan wines in thisks has also done much to enhance their credit abroad. An ancient egstom of Tuseauy is called the Governo of the wines. This consists in adding to young wine a cortain quantity of must, by means of which it is given more body and fruitiness making the wine rich in earbour acid, and therefor more acceptable to local consumers.

The common wines which are soon ready

for consumption are, by the governo, readered more agreeable and more easily sold, This practice is not necessary for the best wines, but in every cas, where the wines are to be exported in cask, for consumption at an uncertain period, it is advisable to wait until the slight form utation caused by the governo has entirely ceased,

To-lay, Tiscany's in Is considerable quantiti s of wines for consumption to Rome, G noa, Turin, Mitan, and Bologna, and a large quantity is also export 1 to foreign countries, where these win some much appreciated, although the prices, specially those of the best qualities, are rather high.

In 1886, the vintage was so abundant that prices became normal again. In Tu-any, the prices of common wines are merikely to be regular, as the increasing production, especially in the Mareum of strong and high-coloured wie s which may be used for blending, contribut a to reader the other wines, which have an excellent flavor, but are too light having bon grown in low valleys or at a consil re-Albeheight, fit for commerce and experta-

The wines produced on soils of special composition, as on the Islands Edu and Giglio, and from Mont Argenturo near Orbitello, ire espicially dry, with an area matic flavor and fine bouquet. In the north of Italy these are not al especially as medical to America.) inal wines. The Tuse in Vermouth, which is prepared by many families, is quite diffor nt to that of Turin. It has not as yet) obtained any commercial importance.

The average production of wine in each province of Tuscany is as follows. -

			H coolitr s
			25% (ий
Pisa			126, 106
			. 1,235,50
Aprilability			526-238
Storia			107,204
figures to			4301,000

Average total or sluct, in for Tuy any 3 069 000

This production compare I with the population of each district gives the following

ugurs			
D	istr: t.	1:F -	ora. Stor Store
			Litrial
Average for th	c Province of	Lat	91
Pies Vulterra			177
Assenge for th	r Pro- n - t	Ersa	.150
Lighern Piro Krmo.			11
Average for th	e Province of	Lagrani	117

F r. Fata, i					117
Mainte					175
Average	$f(x,t) \in \Gamma$	F	f Firm n		157
A · ma Monthy in its	frth P				157
Average	far the P	rosth-a i	$t \simeq \sin \lambda$.		195
Averag	for the P	rovanii.	of Grossel	J	52
Assrage	for Tu-s	ny			150

The Tuscan establishments which prepare large quantities of wine are very nu-Following are, however, the merous. usines of the most important, which are renowns I for exporting their wines to foreign countries, or for special awards obtained. the first name I establishments are on the inlls, whence the driest and most alcoholic wines are obtained:-

Baron Rieasoli Firidolfi, Brolio and Flor-

Marquis Ipp, Niccolini, Carmignana, Cav. Emilio Landi, Grave,

Count Pier Pomp o Masetti, Greve, Luige Lubor I Mellini, Pontassiev and Flore too

Calmid Gray, B. Cocom, Montepulciano,

E. O. Penzi, S. Andrea in Percussina or Florence, Piazza deda Signoria.

Liceioli Bros., Rafina, near Pontassieve Roffielle Caselli, Pontassiev. export r.

I. L. Raffin , Pontassieve, Comm. Sausodoni Pueci, Sicha.

Gais pp. Gargoni, P sera.

Count Francisco Giurciantini, Fiorena

Prince Pietro Strozzi, Florence.

Ferni Bros., Island of Eiba.

Princ Antonio Salviati, Migharino, near

Count Pietro Bistogi, Della Badia,

Cav. Luca Munbelli, Leghorn.

Marquis Roberto Pucer, Granajolo Val-ITL-sa

Count Franc, Mastiana Brunacci, Post, Grass pp. 1 (scancilli, D. p., La Cava, near Pentedena.

Mar izzi, Campiglia Maritima.

Form & Parrotti, Lucea.

LAIR M.

Latinana, the proving of Rome, is one of the most extensive of the Kingdom, and hottest and most distant parts of the world. contains five large districts, viz - Civitive this, Vit rlog V lletti, Freshione, and region is Viterlog. Here the culture is not Rome. From a viticaltural point of vi we so exclusive as in the Castelli Romani, but

Litium possesses three principal districts, In the district of V Hetri and the so-called "astelli Romani the vine is cultivated on volcanie soil in au exemplary manner, which yet does not diff r fr in the syst in practised in the days of Old Rome. Of the varieties of grapes which were formerly cultivated, the white was predominant; but since the new plantations and the renovations of the old vin yards, which were made a few years, back when the black vari ties were introduced, the production of white has naturally decreased and we think we may now say that the production of red wines predominates. The wines obtained are naturally strong, agreeable, and keep well; their antehoration has been rangroy d by removing the wines from collars on a level with the grean lefecally known as Tinelli to execlent subterranean grottoes. These gritto's are spicially constructed, being galleries excavated out of Tufa with nich s in the si les, in each of which a butt containing from 8 to 10 Hectolitres is place I. Or hearily the grettoes are provil 1 with one or more ventil dors, through which air is a ladted, and the tareperature regulat d.

T this district also belong these viu s cultivated in the saburbs of Rome, and which are now, wing to cirtain rules being cuf reed by which the first 10 kilometers adjoining Rome is to be given up by cultivators, to be removed to other districts; but these wer less remunerative, and produce wine less appreciated than these of the Cast li Romani proper, on account of being associated with vegetable

The wines of the last-mentioned district are very highly appreciated by the people of Rome, who purchas them at very high prices, which are sometimes much in excess of that of the same style of wines produced els where. Owing to the volcanic nature of the soil, the wines of Castelli Romani possess special quoiti s which commond them, when old, to come des urs. These wines are highly hygeme, and ir ton h Patrinouno Boldrani, Campigota Marit- recommended by the incheal profession.

The two firms of P li Ostini and Jacos our Broth re, both of to princ, near Boine, keep these wines for a number of years, and soud them, with splendid results, to the

The sec alcenter of production in this

the vines are always trained on trellis work in close proximity to each other.

White grapes are the most extensively cultivated, but the black are also grown to a certain extent.

Here the grottoes are less frequent than in the Castelli Romani, but if the wines are well prepared there is little difficulty in keeping them. This district produces more wine than is required for local consumption, but as no city having a large consumption is near, and as these wines are not liked by the consumers of Rome so much as those of the Castelli Romani, they are sold at very moderate prices. Hence the reason why these wines find a quick market in the north of Italy and in foreign countries, to which some good establishments have of late years transported them.

The third important producing district of this region includes the district of Frosinone, in the province of Caserts.

Here, contrary to the custom of other districts in this region the vines, and especially the white varieties, are associated with trees in their cultivation. The wines produced are ordinarily good and keep well during the winter; and with the addition of a portion of concentrated must, it is possible to keep the wines better during the summer and mature them. This region is beginning to produce more than is required for local consumption, and many of the producers have now commenced to improve their system of preparing wines. grapes are carefully chosen, the black being preferred to the white. Much care is taken in the cultivation, and an endeavor is made to produce wine capable of being kept without the necessity of adding concentrated must.

The prices are generally low, and up to the present these wines have not been shipped to foreign countries. What is not consumed locally is marketed close by.

A considerable increase in the planting of vines has been lately made in the province of Rome along the coast, especially near Civitavecchia, Nettuno, and Terracina but the production is still too small to induce us to allocate these vineyards in a fourth district. We must, however, mention that here wine is generally cultivated exclusively, and they have a sandy soil which makes it impossible for any damage to be caused to them by the Phylloxera.

The special wines or vini santi, which are prepared in the Roman provinces, as in many others, are not of importance, hecause the production is limited, and the results not always uniform.

The average production of wine in the province of Rome is at present estimated at 1,927,300 hectoliters; this production according to the population of each district is as follows:-

Districts.	Average production of wine per inhabitant.
	Litres.
Civita Vecchia	1=
Fraginana	****************
Frosinone	206
Rome,,,,,	103
Velletri	
The sales	
Viterbo	210
Average for the province	of Rome

In this province the following establishmenta may be mentioned as the most important and recommendable:--

Felice Ostini, Genzano and Rome. Jacobini Bros., Genzano and Rome. Famiglia Santovetti, Grottaferrata and Rome.

Marquis Ferrajoli, Albano. Prince Ginnetti d'Avellino, Velletri. Cav. Oreste Vanni, Viterbo,

Prince Ruspoli, Vignanello. Prince Del Drago, Filacciano. Mancini and Sindici, Ceccano.

DANGEROUS CANNED GOODS

The following medical advise in connection with canned goods is worth remembering: The fact that canned goods are cooked goods cannot be too widely known or carefully remembered by users. They are not put up in vessels from which they are to be caten when convenient to consumers, but are only packed in thus in order to preserve them. No canned goods are guaranteed to keep fresh and remain sound for any number of days after being opened. When opened the contents of the tin should be immediately tarned out and caten as soon as possible. If the food must be kept at all, cover it up and keep in a cool place. Turn it out of the original tin into a dish. The liquor around lobsters, salmon, and all vegetables excepting tomators, it is desirable to s.rain off and throw away. Lobsters and prawns are improved by being turned out into a sieve and rinsed with clean, cold water. Never on any account add vinegar, sauce or any kind of condim ut to tinned foods while they are in the tins, and never leave such mixtures to remain an hour or two, if from forg tfuluess it is done.

All tinned goods are put up as fresh as t is possible to be; but unless corned or isalted will not k-ep after opening as freshly as cooked goods will, and certainly not longer, as many thoughtlessly suppose or expect they will. Sardines if preserved in good oil, and if of good quality, will be an exception. As long as the oil is good the fish can be kept in the tins, but two or three days is long enough to trust these before eating. Consumers should not buy larger packages of canned goods then they can consume quickly; if they should, most of the fish and meats can be potted after cooking, sauces and seasoning being used. If the nose and eyes are properly used, it is us impossible to partake of an unsound tin of canned food of any kind as to partake of bad meat, fish and vegetables from a shop.

POULTRY IN THE ORCHARD,

While it is undisputed that an orchard is one of the best places in the world in which to establish a ponltry-yard, we have also found that poultry is good for trees. We have 16 Shockley apple trees, seven years old, standing in and around the poultryyard. Some of them standing directly in the runs of the fowls have as many apples on them as any five on the outside. This is conclusive evidence that the one is beneficial to the other. The chickens destroy all bugs and insects that prey upon the trees and fruit; at the same time they keep down all grass and weeds and keep the surface of the ground well scratched up and a mellow condition, thus promoting the health and vigor of the trees, causing them to bear larger and better fruit. Some of the trees in our yard are literally hanging with nice apples, and so heavily luden that we are compelled to keep the trees well propped to keep them from breaking down. Shade is one of the indispensables about a poultryyard in the summer months, and it is certainly better and more profitable to have some good variety of fruit. We at the same time get the needed shade and a bountiful supply of delicious fruit, if of the same kind. We should certainly advise all to have orchards for poultry and poultry for orchards, for the one will be greatly benefited by the other.-Ex.

TRE OLIVE,

Varieties now Cultivated in California and General Observations.

183 B. M. Le Long, Secretary State Board of Horticulture, !

The following translation from the "annals" of the National School of Agriculture at Montpeiller, France, will furnish the most reliable information obtainable to growers of this valuable fruit in California; PICBOLINE.

A variety believed to be the Picholine is fruiting in several parts of the State under one of its synonymes of Ohlonga,

Synonymes. - Pichouline, Pecholine, Pijbuline (Langurdoe.) Saurine, Rozier. Nunes) Sausen, Saugen, Sauzin (Gard.) Saurenque (Aix) Plant de Santin, Saurine punchudo (Marseille.) Piquotte, Piquett Beziers,) Coiasse on coilasse, Reynaud. Lacques patarde (quelques localities del' Herault.) Olivo lechin, Tapbula. Piguoli Duhamel (Genes.) Olea ovalis Clem nte Olea enropaea santina, Risso. Olea enro paea oblonga, Gonau. Olea frusta oblongminore, Tournefort. Olea minor oblongs. Magnol.

DESCRIPTION.

Tree of vigorous growth, but of averag dimentions; its trunk is cylindrical; itbark is easily detached from the trunk is large, irregular layers; its branches extenhorizontally and of slight build; the rejec tion of its leaves is not numerous. Branches not very vigorous, short, strong. inserting themselves at right angles; of a greenish, yellowish color; near the bark of a rugged nature covered with unmerons protuberances which are quite visible; wood cylindrical and flattend slightly; knots few in number. Leaves ovat, lance shaped, very often enlarging themselves at the superior part; of average length, average length five and one half to six and a half centim. Width one and a quarter to one and a half centim. Top surface of a dark green color; bottom surface approaching end of leaf rather thick and of a solid white color. Stem very thick, hard, breaking easily. Veins very visible from the bottom. Stem short, very thick, very much curved toward the surface of the upperside of leaf, Leaf stalk large, long, but little contorted. The leaf perceptibly flat, the edges of which are not very much carled up. The leaves accumulating in great numbers on the young branches, covering them thickly. Fruits generally accumulating in the direction of the branches of the year (yearly branches,) isolated or grouped by twos on the leaf; stalklet very short Fruit stalks very large, short, inserting themselves in a rather large depression of the fruit. Stigmate persistent in an umbilic not very visible. Olive a trifle below the averag size, length two and one half to three centim., width one to one and one fourth centim. Of elongat d form, but large near the fruit stalk, with a tendency of tapering itself towards the point; rather symmetrical. Strongly fortified on one side at a point not attached. Intermediate form between varictics Oliviere and Lucques. The fruit changes (passes) in color from light green to wine red, then to red black. The surface carries a number of spots, speeks, variegations sufficiently visible. Little like a plum. Skin fine, bulb abundant, of a dark red color, fleshy. Kernel (pit) small, very elongated, pointed at both extremities, with a more pronounced curvature than is generally found in most olives. Tree of is almost exclusively grown for the sake of average maturity,

OBSERVATIONS.

The Picholine is widely known (spread) in certain parts of Province, particularly so in the neighborhood of Aix, Tarascon, Marsville, One likewise encounters it again frequently in Languedoc, but only by its name, as it is only a secondary varity there; perhaps also in some localities of the department of Gard. It is a variety yielding a good and regular production, being rather hardy (rustic,) it is able to stand severe amputations, to which it has been subjected at Hante Province. It is cultivated sometimes for its oil, but more often for having the fruit picked green, having its commercial value in view as a (pickle) preserve. The Picholine is a v ry blicate olive, as much prized as the Olive "Verdale" for table use, and which is a ld often under the name of "Lucques," but esembling it a little only in form.

SAILLELN.

Fruited in this State this year under one d its synonym s of Atro-Rubeus.

SINONYMES-Smilletne (Nimes.) Sarg ne Mea minor, rotanda, rabro-nigrigaus, Furnefort, Oka A'ro-rulens, Flor Monsp, DESCRIPTION.

A very hardy tree, middling or tall, spreading out, trunk v ry big, cularged at the base; the bark comes off lengthwise in thin strips of blackish color; the main limbs are horizontal or slightly set up; shoots very numerous; it is one of the varieties which put forth the greatest number. Branches pretty vigorous, generally in limited quantity, big, much bulg d out at the insertion, of durty yellow color, longitudinully striated and covered with apparent and numerous freekles; wood decidedly canali. enlate; knots little prominent. Leaf lanceolate regular, short, relatively large, (mean tength six to seven centim., width one and oue-quarter to one and one-half ceutim.); upper face shining light green, a little wrinkled; under face covered with a dirty white coating pretty abundant. Limbs not very thick, fixible; nerves well delineated on upper face; mucrou well marked on the wide point of the leaf; hard, short, bent round. Petiole big, short, bent over, bringing the leaves upon one another on the same side of the branch. The leaf is nearly flat, the edges but slightly drawn back. The cover of the tree, little provided with leaves, on the inside is always tolerable thin. Fruits for the most time isolated, occasionally grouped in twos, one two-year old branches. Pedaucle long (fruits hanging down), inserted in a light depression of the fruit; stigm; persistent in a well marked umbilic. Olive pretty small (length one and one half or two centim,, width one to one quarter centim.), nearly ovoid, a trifle oblong, slightly bulged out on one side. The fruit is deep black when ripe and very hoary; skin thin; bulb not abundant nor fl shy, juicy, colored a deep vinous red; pit big, of same form as the olive; tree of middling maturity.

OBSERVATIONS.

The Sallern is pretty much cultivated in Province, principally about Aix, and in Langu doc. It is a delicate tree, sensitive to cold, and consequently not many old plantations of this kind can be found. It is nevertheless a merito ious variety, esp. cially on account of the excellent quality of its oil. It brings out fair crops, bears most every year, and deserves to be planted in the situations and localities where the winters are never very severe. The Saillern its oil.

Fruited this year under one of the synouymes of Cayonne.

SYNONYMES, - Roughtte (Montpellier, Beaucaire), Rousscoun (Avignon); Marveilletto (Manosque) Pigau or Rougette, Laure (Bouches-du-rhone), Vernullau (Gard) Caillose, Cayoane, Rougcolle (Toulon). Olea rubienns (Rozier),

DESCRIPTION.

This tree is hardy, half erect, and a rapid grower under favorable circumstances: trunk cylindrical, canaliculate; bark bluckish gray, wrinkled, the main limbs are citizer horizontal or upright; the forms of a vase or a ball are the most favorable to its development; shoots very numerous. Branches numerous, even on the old wood. hardy, long, thin, horizontal or semi-erect, of a dult gray, wrinkled, covered with many small, regularly distributed freekles; wood irregularly furrowed, even on old branches; knots prominent. Leaf lanceolate, pretty large (mean length five and one half to six and one half centum,, width one to one and one fourth centim.); upper face deep green with pretty numerous punctures stamped on the edges; under slightly coated, greenish white; limbs thick, with edges slightly drawn back; nerves little marked on both faces; mucron tender, little prominent, but well defined in the plane of the leaf. Petiole short, very thick. The braves are very numerous and the cover thick, of deep color; inserted perpendicularly on the branches, the leaves present out their upper face; the result is that the tree is of a deep hue, and can be recognized readily at a distance. Fruits distributed on the whole length of the two-year old branches, more numerous at the base; isolated or in groups of two, three or four. Pedanele pretty long, big enough, entering into a shallow depression; stigma little apparent. Olive under middle size or small (length one and one-half to two centum, width one to one and one-fourth centim, i, ovoid in form, narrowed in towards both ends; the fruit remains light red for a long time, then turns to a reddish black; some olives remain red till the g neral ripens, hence its characteristic name of Rouget. It is speckled with pretty numerous dots well marked on the red or reddish background; not very heary; fruit rather shiny; skin pretty thick; pulp thishy, colored by an abundant vinous red juice; pit middling or small, of clougated ovoid form; very late variety.

OBSERVATIONS. The Rouget is altogether a very hardy variety, and very poenous for propagation in poor land. It thrives in the garrique (waste lands), soils of H rault even in the midst of calcarcous rocks, whore it would seem no vegetation could exist. Under such very untavorable conditions the Rouget developes to a satisfactory sizes and bears regular crops. In the outrropus, covered by a layer of mellow land more or less gravelly, the Roug t bears most every year, and abundantly. The frosts of the very severest winters have spared this variety, and very important plantation, can easily be found, the age of which certainly exceed 200 years on an average. It had multiplied greatly in Languedoc before the development of vineyards. The Rouget yields an oil of fair quality. A great quantity of this olive is consumed in the form of pickles. For the latter use they are gathered up when yet reddish,

VERDALE,

At Saratoga it is in bearing on very steep Michelenque. Amoreux, side hills, so steep they can hardly be cultivated. The trees this year were full of Plant d'Arguieres. Amoreux (Marseille). fruit and doing well.

Synonymes Verdaou, Verdau, Vereau, Aventurier (Frej is.) Calassen (Lorgues Var.) Diea veridula, Gouan, Flor. Monsp. Olea media rotunda viridia, Tournefort, Olivo verdago, Tablada,

DESCRIPTION.

This tree is of dwarf habit, half erect and has little vigor; trunk thin, short, conical, canaliculate, with bark rough and greenish-gray; branches slightly dicoping, principally those at the top of the free the tree has a general form of a ball, with a light cover; the roots do not penetrate to a great depth, and the tree is frequently rooted out by strong winds. Shoots scarce easily grafted. Branches are not mum r ous; upright or slightly inclined, inserted at a right angle, of a dirty yellow or light yellowish gray color; freekles scarce and dim, knots pretty prominent. Leaves linear, short, very narrow, well characterized by their feeble dimensions. Lougth. five to six centim.; width, one-half to threequarter centim. Nerves, very prominent. of light green; edges drawn back and forming a regular well marked channel. Mucron not detached, little prominent, little acute, situated in the plane of the leaf, slightly inclined in the direction of its enryature upper face dull light green, a little wrinkled; under face dull white; limb of medium thickness; petiole short, thin, but round so as to bring the upper faces of opposite leaves together; all the leaves are situated in the same plane on the branch, and frequently form with the latter a very neute angle. The leaves are pretty numerous at the ends of the branches, scarce elsewhere; cover of the tree light. Fruits isolated, never gathered in great numbers, with pealuncle of middling length, thin, dirty green, inserted into a shallow depression; big, nearly round, slightly truncated at the top infan dibaliform (funnel shaped); very green till nearly ripe, then of a vinous red. and finally of a deep black, somewhat dull; very hoary at maturity; olive soft, with pretty thick skin; pulp fleshy and little jucy; pit very big, of same form as the olive, with surface but slightly furrowed; very early.

OBSERVATIONS

The Verdale is much cultivated in Languedoc, notably about Montpellier, Beziers, and in Gard; it is exclusively cultivated in some communes (for instance Aniane, Herault), where green olives for table use are prepared on a large scale. The Verdale is also found in Vanctuse and in Bouches-du-Rhom, but not so extensively as in Lunguedoc. It is a very early ofive, but little productive of oil; it also rots pretty quickly when fully ripe. On the other hand, the Verdale deserves to be propagated when green olives are wanted, for it is a nice olive, generally much appreciated for the table, and is the subject of a very important trade, it must, however, be set out only m good ground, or m ground of medium quality, as its productions fall out in had soil. The Verdale is pacity sensitive to cold, and the dropping off of the olives frequently diminishes the crop.

OLIVIERE.

Synonymes-Ouliviere, Oulliviere, Oulivicira, (Herault). Pointsie (Herault); Pounchudobarralenquo (Provence), tial-Imenque, Galmenque, Roser, Amorena, Fruiting in several parts of this State. (Languedoc). Liviere, Laurine. Rosar, Ing today, but the Oliviere, either alone shallow depression of the fruit, stigma per-

(Benneaire). Bouteyenque, Amoreux Angelon Sage Reynaud (Gard), (2) Ounna (Ronssillon). Olea curopaea media oblonga angulosa Gonan Flor, Monsp. Diea europoica laurifolia. Risso, Olea fruetu majusculo et ablongo, Tournefort,

DESCRIPTION,

This tree is hardy, never of a very large size, and spreads out; trunk cylindrical; bark blackish gray, full of fissures about the trunk and heavier limbs; comes off in short regular strips; the heavy limbs are either horizontal or inclined downward, their many branches falling to the ground; the whole tree looks like a cylinder much broader than high; has usually but few shoots. The young branches are vigorous, bent round, spirally arranged, and grow out at an acute angle; they change from a clear ashy gray to a blackish gray after the first year; the wood quite quadrangular at the outset becomes cylindrical as the quality of the oil expressed from the Oliviero branches grow older; besprinkled with light brown freekles, slightly striated; medium size knots. Leaves oblong, oval, lanccolate, large to very large (mean length, eight to nine centum, ten to eleven centum, in execptional cases; mean width, one and one-quarter to one and a half centim, up to two centum, on the hardier stock). Upper face of shining light green; thick, even white coating on lower face; himb thick with edges much drawn back, forming a channel; nerves appearing only on upper face; mucron long, acute, bent round toward the under face of the leaf; petiole middling, inserted at a very acute angle, e-pecially at the end of the branches where the leaves are habitually accumulating, The leaves are very numerous, and the cover of the tree thick; they are, b. sides, drawn up, presenting out their under surface, so that when seen at a distance the tree has a very peculiar whitish appearance. Praits gathered up at the base of two-year old branches; almost exclusively on drooping, seldom on dressed, branches; often in groups of two and three; pedancle long, of unddling thickness, entering the fruit in a rather deep depression; stigma little apparent in an umbilic little marked at the point of the fruit; olive of medium size. length, one and one-fourth to two and onefourth centim,, width, one to one and onehalf centum, tlattened out at the insertion; of cylindro-conical shape, but slightly buiged on one side; little clongated and ending abruptly by a prominent and well delineated point, hence the characteristic name of pointue (pointed) under which it is known in certain localities. The fruit changes from green to red, and finally becomes, at maturity of a bluish black color, with a few spots of dark red; it is divily dotted, hard when ripe, and very hoary, thin skin; pulp whitish, colored by dirty red and not abundant juice; pit pretty large, of the general form of the olive, with wrinkled surface, and a very sharp point, tree of second maturity. OBSERVATIONS,

The Oliviere is one of the most ancient varieties of olive trees, cultivated in certain parts of Languedoc. Amoreux states this fact in his Traib de l'Officiere, published at the end of the last century, "The Omice pouncheels is one of the most common around Montpellier, and it is almost the only one to be seen about. Nurbonne, and throughout Languedoe as far as Breziers," There are but few of these large plantations remain-

(Gard). (2) or mingled with other varieties, may be found in almost every place where the land owners have preserved trees enough for their supply of oil so that if the Oliviere cannot be considered the most cultivated variety, it is the most widely spread in Languedoe. It exists also in Provence, in Roussillon, in Alg ria, and in certain parts of Italy and Spain. The Oliviere is a very hardy tree of great long evity, sturily, and withstands without much injury the most severe frosts. This opinion is shared by Rozier Laure, who considering this variety as sensitive to cold, has undoubtedly mode his observations in damp regions, where it was commonly met with in former times, It grows to perfection only in a rather rich soil. In soils that are too dry or too poor quality, its vigor lessens; its production is affected and it becomes then inferior to more robust varieties. In suitable ground the Oliviere is very productive, it bears abundantly and most every year. The varies greatly according to the nature of the soil where it is grown; good when grown in gray: llv or light soil; the oil is, on the other hand turbid, that is, full of sediment, when coming out of damp or rich lands. In the latter case it is little liked for table use, Owing to its vigor the Oliviere withstands without much inconvenience severe pruning and even the heavy amoutations to which it is at times subjected. The old wood gives new shoots easily and lean very well be grafted. Most of the hardy varieties, however, possess the same qualities...

LUCQUES,

This variety is now fruiting at Liv. rmore, Cal.

Synormes - Olive de Lucques, Lucquoise (Basses-Alps). Oliverolle (Beziers,) Odorante. Olea minor, Luceusis, fruetu oblongo, incuvo, odorato (Fourneforg). Olen curopaen ceraticarpa (Clemente,)

DESCRIPTION.

Tree of middling vigor and development; semi-creet; cylindrical trunk; the bark comes off easily in long strips, so that the trunk is often almost laid bare; the main limbs are either horizontal or erect; as a whole, the tree habitually takes the shape of a vase, a ball, or sometimes of an umbrella, according to the mode of trimming; shoots searce; branches hardy, long, straight, erect or horizontal; young branches pretty numerous, situated upon the limbs at a right angle, g nerally drooping of a decided gray color, longitudinally striated and covered with a great number of freekles; wood or hexagou form, especially at the end of young brauches; prominent knots.

Leaf sublinear lanceolate, Tretty long, but narrow (mean length six to nine centim., width three-fourths to one and onefourth contine.), upper face light green,dull. somewhat wrinkled, under face covered with a dirty white thin coating; limbs not very thick; nerves little marked, even on upper face; mucron acute, short, bent round in the plane of the leaf, petrole long, thin, bent round. The leaf is drawn back at the edges, it is unequilateral, and assumes the shape of a very much clongated crescent, ending by the mucron, the cover of the tree is protty light, owing to the limited number of leaves, their relative smallness, and the divergent disposition of the branches,

Fruits often isolated, distributed for the most part at the base of the young branches, peduncle long, thin, entering into a

sistent in a well-marked umbulic; olive pretty big, length two and one-half to three centim., width one and one-fourth to one and one-half, of the form of a crescent or a keel, having both ends bent round, and the opposite side to the curvature nearly rectilinear, which makes it of a very peculiar shape. The fruit changes from a light green to a shining bluish black; very little heary; the surface is slightly speckled; thin skin; abundant pulp; pit pretty big, of similar form as that of the fruit, bent round at both ends, with furrowed surface, ending by two points, the lower being the sharper; fruit ripens early.

OBSERVATIONS

The Lucques is not a very common variety; it is found in large tracts in France only where the propagation of olives for the table forms a special industry. It seems to have originated in Italy, where it grows in several places, notably at Verona. It is commonly found in Languedoc, around Beziers, Montpellier, Nimes, Lunel, but it is little cultivated in Provence, except in the Lower Alps; it is also found in certain parts of the Oriental Pyrenees, whence it was brought to Spain.

The Lucques is a tolerably vigorous tree, of medium lougevity. All writers who have studied this variety consider it as very enduring in cold weather and adapted for cultivation on the extreme boundaries of the olive tree region. It may be found in the most various situations, but it grows to better advantage and gives larger crops on deep, hilly lands; it is not to be recommended for garrigue soils (waste lands), or those of poor quality, in which it gives iuferior results. The production of the Lucques is relatively small, but this canse of inferiority is partly compensated by the beanty and excellent quality of the olives gathered green for pickling purposes. It is the most highly prized and hest table olive, and it always commands the highest price in the market when gathered at the right time. The oil furnished by the Lucques is of very good quality, but its fruits are very seldom used for that purpose; except in cases of disease, the olives are always gathered up green as stated above.

PIGALE

SYNONYMES.-Pigaou (Herault). Pigalle Amoreaux (Montpellier), Nimes. Beziers. Pigatado, Amoreaux, (Narbonne). Pognue, Amoreaux (Grasse). Pigau, Marbree, Tiquetee, Rozier, Olea minor rotunda, ex rubro et nigro variegata, Garidel Olea variegata Gouan. Flor. Monsp. (?) Olea pignola,

DESCRIPTION.

This tree is tall, semi-erect, and hardy, canaliculate trunk; bark grayish, knotty, coming off in large pieces about the trunk and primary ramifications. The main limbs are most always upright or semi-creet seldom horizontal. It is one of the tallest olive trees of Languedoc, when allowed to grow without heavy amputations. Shoots numerous and hardy. Branches numerous, hardy, big, smooth, of dirty gray color, much swollen at their insertion, which is at an acute angle; wood slightly channeled on young branches, with small freckles, not numerous and irregularly scattered; knots little prominent. The branches are slightly drooping in general leaf lauceolate. rather short, large enough, mean leagth six to seven centim., width one and one-fourth to one and three-fourths, a little drawn in towards the insertion; upper face deep green, smooth, riddled with small white

a little coriaccous, with edges slightly drawn back, so that the leaf has pretty much the appearance of a wide and shallow channel; nerves a little prominent on the under face only; petiole big, short, straight, growing out of the branch at almost a right angle The leaves are regularly distributed on the young branches, and almost perpendicular to the latter; they are numerous enough, but owing to the tree spreading out pretty much as a rule, the cover of the tree is not very thick. Fruits regularly distributed on the whole length of the branch, isolated er grouped; pedaucle long enough, big, light yellow, inserted into a deep depression; stigma little apparent; olive rather big, mean length two to two and one-half centim. width one and one-quarter to one and onehalf; cylindrical, regular, oblong, rounded off at both ends; red at first, the fruit finally becomes a deep black; heary to a small degree and but for a short while gets very shiny; upon this shiny background come out numerous white dots, well defined, hence its name of Tigale. This olive remains firm until ripe; skin thick; pulp fleshy, little juicy, colored white or light viuous red; pit big, of regular shape as the olive itself; late variety.

CBSERVATIONS.

The Pigale is a commendable variety Granting that its production is somewhat curtailed by its luxuriant growth of wood, the fruits are of good quality and fit for table use, as well as giving a great deal of oil of excellent quality. The largest plantations of this variety were formerly around Montpellier, Narboune, and Nimes: some important ones are still found in the garriques of the Commune of Saint Georges, near Montpellier; it is also met with in Provence, especially about Aix. As this olive ripens very late it cannot be gathered only late in winter, when often its surface gets wrinkled on account of the frost. It would be opportune in large plantations to mingle the Pigale with earlier varieties, so as to have ample time for picking.

VARIETIES INTRODUCED IN CALIFORNIA.

The main object in describing the varieties herein mentioned is for the purpose of identification, and in order to straighten, if possible, the nomenclature of the olive. which is a very mixed one. There are varieties now fruiting in this State known only by some of their synonymes. In one case a variety was propagated under three synonymes, and this fact was not, and could not be, discovered until the trees fruited. The fault lies with the nurserymen abroad, where so many names have been given to varieties, and in consequence thereof the identity of a certain variety by its name is very difficult and is only known by few.

The following varieties are now fruiting in several parts of this State, and are of the earlier kinds. Other varieties and the late ones will be described, with general observatious thereto in a subsequent article.

PENDOULIER.

At the last meeting of the State Board of Horticulture (July 2, 1888), I reported this variety as being somewhat smaller than the Mission. This was due to the fact that the trees from which the specimens were taken, and from which the cuts were made, had not been cultivated or pruned for five years. Tree is a beautiful one, of vigorous growth and of large dimensions; branches drooping (weeping) in character; color of wood light punctures, very well marked (peculiar); green, with smooth, clear surface; it is a

under face greenish white; limbs thick and tree of very good production. Fruit large, generally accumulating singly in opposite directions, also by twos on the fruit stem; length, one and one-eighth inches; width three fourths; color, wine red, changing to deep blue black; has on the surface a number of very small white spacks, which are quite visible, but very minute. Pit (kernel) three-quarters of an inch long, tapering at the upper end, broad at center, with a curve commencing about the center down to the point,

OBSERVATIONS.

At Vacaville this variety is growing in the orchard of Mr. A. Moutpellier. Mr. Montpollier imported his trees from Italy in 1885. They have been planted three years; one of the trees bore fruit for the first time last year. This year all bore fruit (five trees) ex cepting one that has not received any irrigation. Since the trees were planted they have received very good care - they have all been irrigated excepting one, this non irrigated tree receiving the same treatment, has made fair growth, but it is not onewith the size of the other trees, and from present indications it will be a veral year b fore it will bear. The fruit riperred in the first part of October.

At Sonoma this variety is growing in the orchard of Mr. L. P. Rixford. Mr. Riv. ford imported his trees from France some ten years ago. The trees four years after planting, bore fruit in great numbers, and have continued to hear good and regular erops every year; they ripen at Sonoma in November. During the last five years (the place having been rented), the trees received no cultivation or pruning. Notwithstanding this, their production has been good, although the fruit has been somewhat small. Mr. Geo, E. Ladd of Atwater, Merced county, has also a few trees, which bore fruit this year for the first time. They ripened there about the same time as at Vacaville.

MANZANILLO.

Fruit of large size, of irregular orange shape. Color, brilliant purple, changing when mature to deep blue black, with very minute white specks. Pit of a peculiar shape, and different from those of any other olive. This is an early variety. I obtained specimens of it in the early part of October.

OBSERVATIONS.

At the orchard of Don Jaun Gallegos, at the Mission, Sau Jose, I saw several large trees of this variety that were loaded with fruit. From all appearances the tree is a rapid grower and a prolific bearer; the fruit being large makes it easy of handling. Mr. George E. Ladd of Atwater, has also a few trees which bore fruit this year, maturing there much ahead of the above named place, Dr. J. M. Stewart of Santa Cruz, has several trees in bearing. There are also a few trees in bearing at San Jose, Niles, and Santa Barbara. This olive is excellent for pickling and for oil.

BUDRA.

This is a remarkable variety; fruit medinm small, but bears heavy and regular erops. This olive is best suited for oil, but is also used for pickling. I saw trees of this variety in full bearing in the orchard of Mr. John Rock at San Jose. The trees were quite large, and the limbs were very thickly covered with fruit; in fact it was a wonder to me that the trees were able to hold the weight of such a heavy crop without being propped. At Livermore, in the orchard of Mr. Charles A. Wetmore, I also

only having been planted two years. This tree begins to fruit quite young, and is a prolific bearer.

MACROCARPA.

Fruit very large, of light purple color, changing to red black when mature; fruits accumulate on the branches singly and in twos, in opposit directions; tree is of small dimensions, and drooping in character; the leaf is small and narrow; an early variety. The fruit is only used for pickles, to which purpose it is well suited; they contain very little oil which is not of good

This is a valuable olive, both for pickles and for oil; fruit hangs in large clusters, of ı bluish-black grape color, resembling a cluster of grapes. I have counted as many is fifteen large ripe berries on a cluster; a capid grower and a very prolific bearer. I consider this variety one of the most valuable. This olive is now fruiting at San Jose, Niles, and Saratoga.

A RO-VIALA EA

Fruit medium to large, of a deep blue dack color; tree is a vigorous grower, of a reeping habit and of gool production; a ost valuable variety both for pickles and for oil.

This is a handsome tree and a good searer, fruit medium tolarge; rip ms early, the fruit is said to produce a fine grade of oil. It is used for pickling considerably, ooth in its rip and green state. This year the fruit ripened in the early part of October. This variety is found growing in several parts of the Livermore valley, Santa Cruz, San Jose, Niles and Mission San

COLUMELLA.

SYNONYMES-Loaime, Pasala, Columballa, I consider this variety a most valuable: acquisition, because of its productivenessand fruit of superior quality. The weight of the fruit generally brings the branchesto the ground, nuless they be propped The fruit is of a very clear yellow color before maturity, therefore, most valuable for a pickling olive. The tree is a rapid grover of medium dimensions, stocky, and well able to support the weight of the fruit. This variety is found growing at Livermore, San Jose, Nilea, and Saratoga. The fruit through the months of November and December retains its yellowish color, then changes to wine red, and when mature to blue black.

REDDING PICHOLINE (CAL.)

This little olive was introduced into this State several years ago; it is a tree of small dimensions; fruit small, of a deep blue black color; the fruit is gathered on cloths, being stripped from the limb with a hand wooden comb. The fruit makes good oil, and a sweet pickle, but it is best suited as a stock. The true name of this olive is unknown, I also fail to find it described in any book on the olive; possibly in its native country it grows to better proportions than here. It does not belong to the Picholine

This tree is of good production, and of very large dimensions; fruit varies in form; several types have been observed on some trees; this is somewhat peculiar, as among other varieties this does not occur. The fruit hangs on the hranchea singly, in twos, threes, and also in clusters; color, deep purple changing to jet black. It carsaw trees of this variety in fruit, the trees ries on its surface numerous white specks,

but gradually they disappear upon ripening; a free stone; ripens late,

OBSERVATIONS.

There are several "types" of what is known to be the "Mission" olive. Different types are found in almost every old orchard in the State. At the Missien Sar Jose, Mr. John Rock and myself discovered seven types in the Mission Orchand; some are early and some are late; some are long and pointed, while others are round. At this place we discovered a tree that is different from any that I have seen. That tree is over a finished years old, and its branches were heavily laden with very large berries. The fruit is of extra large size, and very carly. At the time we visited the place (November 15th), ne green fruit could be seen on that tree. The hubit of this tree is also different from any other Missien tree. It has a weeping habit, resembling a willow, having a wil low-like leaf. Alongside of this tree werseveral other trees of the same are: the trunk of one of them measured five for four and three-quarter inches in eigenmeer ence, at about four feet from the ground All these trees receive the same care and are on the same kind of soil. The Mission is a tree of great longevity, and those trees, now growing at the various Missions throughout the State, in the prime of health, over a hundred years old, arenough to substantiate this statement. therefore, no comment is needed. It is a tree that has done exceedingly well in this State, and better when properly enred for, and can be found growing and fruiting in almost every county. I have seen state, ments published, in which the writer con tend that this clive is not worth propagating, that it is the wild olive of France, How absurd those statements are, and none but the non-informed could give them ntterance. To the Missionary Fathers we owe much for having introduced and planted this tree in our midst, and although they have gene beyond, from where no traveler returns, these trees stand to-day as a fit monument to them for the good they have accomplished. For over a century they have furnished fruit for food, and oil to heal the sick, therefore, they should be honored as mon the sacred soil in which they dwell.

ALL IN A HALF CENTURY

The unification of Italy.

The annexation of Texas,

The French revolution of 1818.

The discovery of photography, The laying of the ocean cable.

The invention of the telephone,

The emancipation of Russian serfs.

The discovery of the electric telegraph.

The overthrow of the pope's temporal power.

The establishment of ocean steam navigation.

The extension of Russian power into Central Asia.

The great Franco-German war and the unification of Germany,

The great civil war and the abolition of slavery in the United States.

The rise and fall of Napoleon III., and establishment of the French Republic.

The discovery of the sources of the Nile and Niger, and the exploration of the interior of Africa.

Subscribe for the Menentary.

The following essay by H. P. Stabler, Secretary of the Suiter County Horticultural Society was read at the recent Fruit Growers' Convention in Chico:

Fruit culture in California is now assuming vast proportions, and every department is being thoroughly worked up by energetic men. The Urint Union has proven itself eminently successful and insures a market for the California fruit-grower, in the East, for an almost unlimited output of green fruit. The Dried-Fruit Association will doubtless do the same for him for his dried fruit. The success of these two enterprises at once puts the fruit business in this State on a sound basis, commercially, and no doubt will be the cause of many engaging in the business in the near future.

But there are yet serious hindrances to the ultimate success of the business, which, if not overcome and counteracted, will megreat measure reduce the profits and may setionally employ what now promises to rank with the most prominent industries of the State. Undoubtedly the greatest threat ned drawback to the success of the fruit interests of the State is the previdence of depredating insects on both vine and

Nearly every branch of industry is affected by injurious insects. Earth, air and the sea swarm with them. All crops throughout the country are more or less injured by them, and many are entirely rained by their depredations. Cotton and tobacco in the South, potatoes and corn in the West, and wheat and rye in the North have often been rendered entirely profitless by their devastation, but it is the fruit grower of California who suffers most from the depredations of pests. The tree in the nursery, the tree as it grows in the orchard, the fruit on the tree, and the fruit after it is dried is often infested with pestiferous insects.

Our climate, so mild and equable, is wonderfully favorable to the propagation and dissemination of insect pests. While almost every known horticultural product of the world will grow and flourish in some part of California, the pest that infests it, owing, doubtless, to the salubrity of the climate, will also multiply and spread to an incalculable extent. Not only have we to contend with almost every post that is congenial to other climes, but with some species that only exist to a considerable extent in this State

Many of our enterprising citizens who have imported trees, plants, and scions from foreign countries are doubtless responsible for the introduction and subsequent spread of some of our worst pests, but however it happened, we know that the pests are here, and it looks as though their erad ication was going to be a difficult problem to solve.

The crange growers of the southern part of the State are unpleasantly familiar with the cottony cushion scale, the peach and prune-growers of Upper California have been forced into a reluctant acquaintance with the San Jose scale, and the apple and pear growers are sorely troubled with codlinmoth and wooly aphis. The ravages of pests in this State alone annually amount to tens of thousands of dollars, and unless effective laws are enacted by our Legislature, and stringent measures adopted and followed by ourselves, the loss will certainly increase at a fearful ratio. I am not prepared to say that the present laws on the

WARFARE AGAINST INSECT PISTS, signed, but if they are wanting in any essential particular, they should be speedily amended and made to conform to the new cessities of the case. It does not seem to be so much the deficiency of the laws applicable to the matter in hand as the noncompliance with them by interested par- fact still exists that the dissemination of tics.

> From the fact that pests will spread from orchard to orchard, through some process net well miderstood, thus rendering the thorough and scientific spraying and disinfecting of one man useless unless his neighbors also adout the same course, the most stringent and binding in thods should be adoptd and inflexibly pursu d to contest every inch of progress made or threatened by

The inventive genius of the American people has placed in the hands of the modern horticulturist adequate and efficient apphances for the destruction of these insidions enemics. The law has also wisely provided for an officer, whose duty it is to examine orchards, experiment with the nature and habits of insect posts; to ascertain, invent and promulgate remedies and outline the best methods of their application, for the d struction of the posts; to import known parasites if possible, and generally to assist in every possible manner to attain the end desired. Such an officer now exists, and is believed to be worthy and competent. He is doing his duty in a careful laborious and painstaking manner. All also to be Jon. remains with the fruit growers. They should organize in every fruit-growing section in the State horticultural societies. Every fruit grower, however small his possessions may be, should become a member, and every member should regularly attend the meetings. The local inspectors of pests and quarantine guardian should have at all times the full and moral support of every member.

It is notorious that in many fruit growing sections of the State some orchardists anne. ally expend much time and money in spraying, cleansing and pursuing other well-known modes in exterminating pests, while adjoining owners neglect their orchards, knowing them to be infested. thereby affording a hot-bed and breeding place for the worst pests. Vigorous and well directed efforts and a thorough and efficient concert of action seems to be what is needed. Efficient remedies are known to the skilled pomologist and can be ascertained and procured by every one. They should always be applied at the full standard of strength and in the most thorough and exhaustive manner, and by every one who has an infested tree,

A community can be infested from one tree planted in a house-yard, and it is highly important (that every fruit-grower should be well versed on the time of application. When the insect is in its incipient state it is much more easily killed than when it approaches maturity and takes on its defensive armor. Every infested tree should be repeatedly and thoroughly cleansed at the proper times, and in default thereof immediately removed and destroyed.

From a limited experience I am convinced that apathy on the part of the fruit-growers of California is the best friend that the insect pest has yet found. Persons who have but a few fruit trees for family use soom to be the most careless in respect of their condition. They obtain their income from some business other than fruit-growing, ubject are not sufficient for the purpose de- and therefore give their trees little or no 6,000 in number.

attention. Of course it would not pay the latter class of persons to purchase and keep in order a full complement of appliances for the destruction of pests, or to learn from others versed in the matter the most anproved remedies for that purpose, but the of these little on miss to the crchard comes largely from the foul tross of the small grower; therefore, it should be obligatory on the part of such owners to either keep their trees in a healthy state or else remove them. Almost any progressive orchardist would apply the remedies for a nominal consideration, his main benefit accraing from the fact of the destruction of the pests. This should be brought about and rendered compulsory by stringent statutory enactments, or by a strong public opinion, or by the watchful care and persistent importunity of local societies of intelligent pomologists, or by all of these agencies,

Many of the intelligent, experienced and pregressive California orchardists also seem to be derelief in contending against the spread of injurious insects. They do not vouchsafe to the subject the importance it deserve. They do not realize that unless prompt and vigorous preventive measures are pursued their property is constantly deteriorating. It is not enough to wait until the enemy appears and appreciable damage is done before action is taken. A "preventive is better than a cure. The orchardist should be untiring in his warfare." He should disinfect and spray upon knowing the threatened danger, and that too with the same regularity that he prones and cultivates, regardless of labor and almost regardless of expense.

The continuous and necessary custom of transporting scions and nursery trees to and from all parts of the country, of itself foreshadows the danger, and the unwritten history of scores of dilapidated and ruined orchards in many parts of the State fully demonstrates it.

The frequent and instructive meetings of this and other similar organizations attended by fruit growers, bring home to their minds a full and ample knowledge of remedies, and they should be applied with alacrity. The cost is meansiderable compared with the benefit.

I believe that with a unity of action and with a wholesome individual energy on the part of the fruit producers, the prevalence of injurious insects in California will be materially lessened, and they may be exterminated,

One of the biggest-if not the biggest drink on record was the mighty bowl of punch made at the house of the Hon. Ed. ward Russell (Commander-in-Chief of the English forces in the Mediterranean during William the Third's reigns on the 25th of October, 1604. A fountain in the garden did duty for a bowl. This fountain was in the center of four paths, which were all arched over with lemon and other trees. Along each path tables were placed the whole length, and were covered with cold collations, etc. The ingredients of the punch in the fountain were. Four hogsheads of brandy, eight hogsheads of water, 25,000 lemens, twenty gallons of line juice, thirteen hundred weight of Lisben sugar, five pounds naturegs ografed), 300 toasted biscuits, and a pipe of Malaga, A large canopy was creefed over the fountain as a protection against rain. A little hant was built expressly, in which a boy rowed round and round the fountain filling the cups of the company, which exceeded 6 000 in number Fx

A WONDERFILL INVENTION

The Practical Application of the Phonograph Illustrated,

About a dozen interested persons assembled in the office of the Pacific Edison Phonograph Company, at 323 Pine street, San Francisco, last week, to observe the workings of the wonderful talking-machine invented by the Wizard of Llewellen Park. Orange, N. J.

The little company had gathered in response to invitations from President John 1. Sabin, and was composed almost entirely of newspaper men,

Mayor Pond dropped in during the exhibition of the accomplishments of the inanimate conversationalist and expressed both wonder and pleasure.

The mechanism of the phonograph has been repeatedly explained in the public prints, and the object of yesterday's private exhibition was to show the uses to which the invention may be put. That these uses are numerous and of great practical value was clearly demonstrated.

Cornelius Nestar, an expert from the Llewellen Park laboratory, who came out to this city to explain to the managers of the new company, which has taken hold of the new invention, all its mysteries, was present, and in a business-like manner proceeded to enlighten the spectators.

THE BEAUTIFUL LITTLE MACHINE,

The phonograph, which is a small instrument not more than eighteen inches in length by about eight inches wide and six inches high, occupied a position on a table in the company's front room. By looking at it the observer could gain about as much information as to its wonderful properties as he could gather by gazing at a telephone box on the wall. It looked as domb as an oyster and not more intelligent. But when it had opened its batteries into the ears of the listener, it proved as valuable as Bob Ingersoll on the rostrum.

"Now, gentlemen," said Mr. Nestar, "how shall I introduce you to the phonograph? As members of the press? Yes, that will do,"

"Phonograph, these are members of the press. They desire to speak to you."

Several reporters were then called up and asked to speak to the instrument through the medium of a mouthpiece attached to the phonograph by a guttapercha tube. They were not very communicative, however, and Nestar took the tube and poured into it a volume of rapidly spoken, but distinctly intered words. A verse of "Mary Had a Little Lamb" was repeated in several voices with varying intonations, incloding side remarks, facetions and otherwise, laughter, coughs, etc. Then the scribes were called upon to listen.

Three flexible rubber tubes were attached to the muchine. They were about four feet long, the onter end of each forming Y. At the ends of the prongs of the Y were small glass bulbs, which the listener placed to the ear, one in each ear. By this contrivance the tube hung from the head without being held, leaving the hands free for writing,

"YOU HAVE THE RESULT."

" Now, I torn this handle," said Nestar, "and you have the result,"

The result was truly astonishing. There was no uncertain sound about it. Just as spoken, the phonograph spoke. Not only

intonation and accountaion came back. clear and distinct.

The test occasioned considerable merriment, Mr. Nestar's wittieisms having apparently gained considerable humor by transmissions to the machine.

Then President Sabin came in and read a number of business letters to the phonograph, and the instrument repeated them verbatim, and as often as desired.

"Now," said he, "you will understand the utility of the invention when I tell you that I have only to remove this wax cylinder, to which these letters have been transmitted, give it to our typewriter and have her answer them according to instructions, which could also have been transmitted, or have her copy them. If copies were desired, all she would have to do would be place her cylinder on her phonograph, but the tubes to her ears, start the instrument and copy at its dictation. Each cylinder will receive 1,000 words, or a talk of eight minutes. When a cylinder is full, it can be removed and replaced by another, If when copying from the machine, a word is lost, the type-writer has only to touch a treadle under the table with her foot, and the phonograph will stop, the cylinder will move quickly backward, and when her foot is removed the forward movement will be resumed, and the word or words repeated. This may be done as often as desired."

USES IN BUSINESS

"I read my mail to the phonograph. give my instructions for answers, and hand the cylinders to my type-writer, and my business is finished.

"That is one of many bosiness uses. There are other more entertaining ones. The machine has been perfected to such an extent that we can take public speeches, operas, songs by great singers, and reproduce them at home if we have a phonograph there. I will let you hear a grand march, played by a band at Orange, N. J. Here is the cylinder."

The little round piece of wax was placed in the phonograph, and the listeners heard as fine a rendition of "The Rognes" March," by a brass band as they, perhaps, had ever heard. Discarding the tubes and placing a large funnel-shaped pasteboard contrivance to the instrument, Mr. Sabin sent the cylinder through again, and the music was plainly audible to a dozen persons around the table.

With the tubes it was as loud as if the band had actually been in the same room.

Mr. Sabin had explained that the march had already been produced from the cylinder hundreds of times.

"When the phonograph is in general use we will have cylinders containing songs by star singers, band music, speeches of great orators, taken exactly as delivered, on sale at our offices. Then, if you have an instrument, and you failed to hear Patti sing "The Last Rose of Summer," you can go down town, buy a cylinder and return to your house and hear the song as often as you like. The reproduction is identical with the original.

REPLODUCING SONGS AND SPEECUFS,

"We can now take a song, a speech, an opera, or orchestra, or band music, by means of this funnel at a distance of sixtyfive feet.

"We have also mailing cylinders which may be loaded, folded and sent through the mails. You can take all you want in loud as the reporters and Nestar had San Francisco, and as fast, and then send your voluminous correspondence to your was every word reproduced, but the voice, friend in the East. We also have a system and money and a failure to realize in-door colture,

for duplicating cylinders. That is, after filling a cylinder we can have so many more of them made as we desire for sale or other purposes.

"The phonograph is expected to deaway with stenographic work, and to prove a labor-saving machine. They will be leased for \$3,33 each per month.

The North American Phonograph Company has acquired control of the phonograph, and has transferred the use of the instrument in California, Nevada and Arizona to the recently organized Pacific Phonograph Company, of which Mr. Sabin is President, Major Frank McLaughlin of Oroville is Vice President, Andrew White Secretary and Louis Glass General Manager.

The capital stock is \$2,500,000, and all of it has been taken, -S. F. Examiner.

PLANCING TRULE TREES.

A common error, observes the American Agriculturist, in planting fruit trees is in setting them too closely, especially apple trees. The South suffers more from this practice than any other section. The reasons for this suicidal policy are ignorance of natural laws governing the growth of vegetation, the persistence and persuasiveness of canvassers who wish to sell as many trees as possible, and the ambition to have many varieties on a small plat of ground. The evil effects are not perceptible at first. While the trees grow rapidly and the roots are comparatively small, no bad results are apparent. But when the trees have come to the bearing age, the result disappoints and disheartens all who are led into this fatal blunder. In the South where the warmth and sunshine demand more moisture and plant food to sustain the tree during a long period of growth, together with fruit production, trees and vines should be set so as to avoid the robhery of either moisture or plant food from one tree by another. Where trees or vines are planted so closely that the roots interlace each other, the effect during a proracted drought is disastrons.

A promising orchard of 300 trees, the property of a neighbor of mine, just begiuning to bear, on which the owner realized \$900 last season, was sacrificed to this close planting policy. The trees, which one year ago showed evidence of health and vigor, have assomed a sickly appearance. Cutting out every alternate tree, with a liberal dressing of fertilizers, will save the orchard if the owner has the intelligence and nerve to do it at once. what a loss to the soil, this production of 150 trees which can only be "cut down and cast into the fire," and the "survival of the fittest" will be set back two years at least by this plan of planting and then thinning an orchard. The apple tree demands a rich moist soil. If these conditions are furnished, it assumes large proportions and gives immense yields. Why, then, dwarf, starve and mutilate? Is it not better to have five thrifty trees producing fifty bushels of healthy fine fruit than fifty bushels of wormy, knotty, gnarly specimens fit only for pags and thieving vagrants? In the latter instance the soil is taxed to produce the wood of fifty trees instead of five. The cost of purchasing, planting, etc., all contributes toward swelling the contrast in the amount paid out. In the first instance you will be rewarded with satisfactory results; in the latter there will be disappointment, loss of time

when your orchard comes in bear-The same results comparatively, ing. though not so rapidly, manifest themselves with regard to the vine. Too close planting will sooner or later result disastrously, The proper distance for setting apple trees is from thirty to forty feet; for the grape not less than fourteen to eighteen feet for vigorous growing vines. Of course, methods of training, root-pruning, top-dressing, etc., will modify these figures with regard to grapevines, but better have them too far apart than too closely crowded.

MUMMILS AS MEDICINE.

Among the standard medical books of Nuremburg of 200 years ago are "portions of the embalmed bodies of man's flesh. brought from the neighborhood of Memphis, where there are many bodies that have been buried for more than a thousand years, called Momia, which has been embalmed with costly salves and balsams. and smell strongly of myrrh, aloes and other fragrant things "

The learned doctors of France, Germany and Italy all made great use of this eccentric drng, and in the Seventeenth Century grievons complaints arose from its adulteration. Monsieur Pomet, chief apoth cary to the French King, records that the King's physician went to Alexandria to judge for himself on this matter, and, having made friends with a Jewish dealer in mammies, was admitted to his store house where he saw piles of bodies. He asked what kind of bodies were used and how they were prepared. The Jew informed him that he took such bodies as he could get, whether they died of some disease or of some contagion, He embalmed them with the sweepings of various old drugs, myrrh, aloes, pitch and gums, wound them about with a cere cloth and then dried them in an oven, after which he sent them to Europe and mar. veled to see the Christians were lovers of such filthiness But even this revelation did not soffice to put mummy physic out of fashion, and we know that Francis the First of France always carried with him a well-filled medicine chest, of which this was the principal ingredient.

A traveler also records how one of his friends found in the tombs at Chizeh a jar carefolly sealed, which he opened, and found it to contain such excellent honey that he could not resist eating a good deal of it. and was only checked in his feast by drawing out a hair, whereupon he investigated further and found the body of an ancient Egyptian baby in good condition and adorned with jewels. He does not record how he enjoyed that meal in retrospect. Imagine dining off the honeyed essence of a baby Pharoh!-Nineteenth Century.

ORCHIDS

There are several varieties of orchids that can be easily cultivated in the window garden: the time is not fat distant when among other flowers growing in the parlors, we shall see the grotesque slippers and butterflies of the air plants. The baby orchid, so named by Professor Marsh, of Yale, is among the most carious. On the inner part of this flower, which is really Odonglossom Grande, is a perfectly formed boy, with chubby legs encased in yellow and red-stigled troosers, lying under the wings of the parent blossom. Because orchids are so clean, the plants being attached without any soil, to a cork or piece of pottery, will make them particularly desirable for

GER PAPER

by the Youngest Apprentice.

THE MEDCHANT, which is the only vitienitural paper published on the Pavine Coast, is owned and issued by the firm -Hughes & Co., who by years of laber and patience have incr ased its circulation to many thousands of expos, which are widely circulated all over the Unit-States, and especially in Chiferens, Oregon and N vidy,

The office is situated at 311 Seisemstrict, and facing the East. There we three diff rent 'bus of cars passe 2 with: a block; with one line passing the later As the Post Office, Custom Horsen differs ernment Appears is Building are in this locality, it is, therefore, in one of the best business portions in the city,

As you go into the other to your right t the comp sition room, which is in the castern and of the building, and is will light d with the ventilation perfect

Besides printing The Memourer, the firm does all kinds of book and sob-pareting. It has a complete asserting at of type is fully equipped, and turns out its work with neatness and dispatch. During th last year this other has printed any amount of circulars, programmes, and advertisements, which were highly satisfactory to its many customers.

The visitor after spending an inter-stinhalf hour in seeing how the paper is set up in type and just in the form all ready to gto press, is well satisfied that a good dear of time and labor are employed in getting out a paper like THE MELCHAST, and is now ready to pass into the press-room. This contains five Gorden presses and fear cylinders of the latest manufacture. The power used is furnished by the Commercial Steam Power Works.

The employees of the composition room are paid by the piece, and those in the press-room by the week.

After being printed The Menchant is sent up to the findery where it is folded addressed and mailed. It is a sixteen page paper, issued every two weeks, and contains both reading matter and advertisements. The type used is br vier, thus admitting a great many articles on different subjects interesting to both old and young.

Ever since its publication at this office it has been protesting against foreign wines and ever encouraging the wine industry of this State, for which, see THE MERCHANT in one of its recent assues, "California is amply provided with both soil and climate to produce the finest wines that ever graced the table of a lord," It also publishes many articles on vineyards and archards, which are of interest to the doctor, lewyer and mechanic, as well as it is to the vine yardist and orchordist.

THE MERCHAST IS SENT to subscribers at the rate of \$ 1,000 for one year, and six months for \$1.75, p stage pad, and delivered by earners to subscribers living it the city. It will be want to any part of the United States or Catable for the above rates. Subscribers resulting in foreign countries can be formshed with this paper a \$3.50 per annum, which is one-half dollar more than to local subscribers.

Last week it gave a full account of the Investigation made by the Viticultural Commissioners into the cause of the "grape ret" which has been threatening the grape vincyards of Los Angeles and adjusent coun-

Those who are interest d in the welfare and prosperity of California, and who bee kind I have in I in this accurate. It has gards, the rockless denoting of California and Prosperity Discussed these in growing and maturing our own roll an smooth halb of good size in come watersheals by available in proving and are increasing each year,

" ADDRESS."

---CELIBRIA.

the Germanto vin To veriph, to send the colory I be grown, in form of leaf and habit of growth, but. ing. It may be set in rows two fet spirt noted by Lon Lon will grow to good sizby Domber. It can be set latir, of ourse, lost I much prefer the plants to be alysis, as they get a good hold in the will be for the hot weather compacent. Exwriting atting with different methods of that the lest methods for good roots is to have the manue under the row and somethis method the roots take a downward nured on or noir the surface

The firsth upp' shape I coloring to any the value of the wood ands in these resames and vintage, should at once sub-parison with the olders rts, and if money to the old of all good citizens is asked in prescribe for The Memorast, which gives in as is proposed will glow with most of the serving the forests from under this was and why issue experiments, facts and trials personed with a war part of the bulb. This confluencions, and securing State support taining to the orange, olive, fig and almoud, root is have seel and winter I much like for the work of the Is ard in experimental also how the wine and raisin industries colory, at I will keep will or better than stations and otherwise, that are p. . Its mosff rithe top has lisapperiod the rest still halfs good. Hard has real inded in the following timely prefrost is injurious, a temp rature below 10 amble and resolutions. d grees will insore than r keeping them if k privatemen. It its three inches in dram-This vegetable, writes a correspondent of letter are only size to though larger ones can

and is do so every. As a market copy I is to beal the cleaned root that tender, and out on the preservation of brush and number then thinly slice it for a flavor among cold lands of our mounthin water-sheds; and, much so as colery, as it requires no banks both 1 total ester a solid. Other meths whereas, the new timber and fuel supply oils of use suggest themselves to those who jot the San Jeaquin valley is wholly inadeand six medies quart in the row, and if set like this flavor in salads, dressings, grave quate to supply the demand; therefore be

TO PROMOTE FORESTRY

maching. I have come to the conclusion, such a bulletin, No. 5, calling the attention, the preservation of our mountain waterof our citiz inspispe fully farmers and irrigationeres; and tors, to the usefulness of mount in forests, [what below the plant, say four inches. By mot only as sources of tumber and fuel sup-lasks for a general support for our forest plies, but also in hindering the flow of sur- exper mental stations as tending to encourgrowth and make a root free from " sprage face water, retaining the rainfull in nature's lage and promot, general forest planting, gles," as they will be sure to grow if may reservors, temporing the violence of winds, and adding beautiful places of resert to the and regulating temperature. In view of attractions of this State

To this appeal the Mornel Board of Trade

Warneys. The preservation of our mountain water supply is of supreme importance to the agriculturests and irrigators of the interrer of this State; and whereas, the integ-To propore if it the table a favorite way into of this water supply is mainly depend-

Bescheel, By the Mircel Board of Trade, that the attention of the Governor and Legislature of this State be respectfully called to the officient and consci-utious The State Board of Forestry has lately is a work of the State B and of Forestry in

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EAST BOUND THROUGH FREIGHT.

Forwarded by the Southern Pacific Co., December, 1888.

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AGENTS

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FRIDAY......JANUARY 18, 1889

THE STATEMENT OF Professor Husman at the Convention of Grape-growers held recently in this city, while doubtless made in good faith and with the best intentions, is nevertheless couched in a tone of alarm calculated to have a contrary effect.

Diseases exist in many of our vineyards, and probably will so long as vines are grown. They are general in the older wine producing regions of Europe. There is nothing strange or new in the development of the different types, and with the exception of the mysterious plague now raging down south, the cause and cure has been thoroughly studied and widely disseminated for the instruction of vineyardists.

To advise the pulling down of an entire city because a fire happens to destroy a block, with the possibility of another and more general conflagration would be flouted as ridiculous, yet attention is given to suggestions that the only way to eradicate a case of hylloxera is to root up all the vines in a district.

Cooler judgement will however, ultimately prevail, when vineyardists recover from the first shock occasioned by alarmist theories and depend for the safety and health of their vines ou the application of proper remedies obtained from practical results of experimental tests.

There is little to be gained by deploring the situation, or painting it darker than it eally is.

SOMETHING TO REMEMBER—A novel matter of locating a leak in a water main was employed recently at Rochester, New York, with entire success. The break in the main was known to be between the banks of the river. A solution of bi permanganate of potash was introduced at a hydraut on the side of the river nearest the reservoir, and observers were stationed on the liver along the line of the main. A deep reddish purple discoloration of river-water at one point soon made the exact location of the leak apparent.

It is reported that a shipment of two tens of Ziufandel grapes will be made to France from this State, that Bordeaux wine makers may test their value as a wine grape. The following is a summary of Bonfort's latest advices from European vineyards:

"The German vintage is finished, and, owing to the extraordinary changeable weather from April to October, the result is far from being satisfactory. The bloom ing went off well enough, and at the beginning of July, the best hopes were entertained for a good year, but towards the end of that month cold and unfavorable weather set in, which continued at intervals up to the time of the picking. As would naturally be supposed, the vintage of 1888 will never be a distinguished wine, it is generally unsatisfactory with au excess of acid and a lack of saccharine. These peculiarities are more particularly marked on the Moselle and the Saar, although the situation is not much better on the lower Rhine and the Nahe, and in the smaller places of Rheinhesse and the Palatinate. In the better localities of Rheinhesse, such as Nackenstein and Nierstein, the yield is much better. The same remark holds good for the best localities in the Palatinate, such as Deidesheim, Forst, Wachenheim and Durkheim,"

While the renewal of the reciprocity or commercial treaty with France remains in abeyance, a great falling off in the export of wine from Italy to that country is inevitable; hence the late meeting of producers and exporters in this city on the 2d inst., at the instigation of Signor Grimaldi, the Minister of Agriculture and Commerce, and the conclusions there arrived at to form a company which is to push the sale of Italian wines abroad, on whose capital the Government is to guarantee the interest of 2 per cent, silver; the granting of an export bounty of 2 francs per hectolitre to all who ship in a year over 500; hectolitres; the creation of a Credit Bank specially in the interest of the wine trade, and finally, reduced freights by rail and ocean steamers.

There has been a good deal of animation at the French vineyards in spite of the nearness of the close of the year, especially in classified Medoc growths which the trade is buying extensively; soon there will be hardly any left.

Really desirable Spanish wines continue tending upward, and are now considerably higher than what they were at the commencement of the campaign. They are comparatively scarce throughout the peninsula, and in active request.

A convention is about to be held in this city at which all the raisin men of California, growers, packers and dealers will be gathered.

The convention will have for its object the giving of a distinctive individuality to our crop and the improvement of the pack. The following are the changes proposed:

"First—To adopt a uniform system of grading and packing.

Second—The establishment of grades to be known as California Selected Bruch and California Selected Clusters, to take precedence over our present high grade known as 'London Layers' and 'Dehesa Clusters'

Third—Remodel what we now term London Layers, dropping the word London and substituting the word California, making a grade known as 'California Layers,'

Fourth—To drop entirely the Spanish emblem which we now use, the 'Crown,' and substitute in its stead the 'American Eagle,' or 'Star,' establishing grades known as 5 Eagles, 4 Eagles, 3 Eagles, etc.

Fifth—To abolish the system now in vogue of contracting for vineyards, taking the entire crop of all kinds at one price. The grower who takes extra care and pains in cultivating and producing fine large fruit, especially fine bunches and clusters, should receive proportionately more money for his fruit than the grower who is negligent and delivers small fruit and scraggy bunches.

Sixth—To consider the proposition of buying by months as was talked of last year. The grower should receive more money for his early deliveries than for his late deliveries. Raisins delivered in September and October are worth more money to the packer than raisins delivered in November and December."

The success of last year and the high standard our raisins have in consequence attained in foreign markets is anflicient justification for an exhibition of self-pride on the part of the grower.

THE Evening Post in a recent article on the labor question which is now being agitated throughout the State, draws a comparison between the extravagaut size of our vineyards and those of the celebrated wine paoducing sections of the old world. It says: "One would have to travel many days in France to find a vineyard of more than three hundred acres, and for one of that size he would find a hundred less than thirty acres, while in California vineyards of from 600 to 3,000 acres are not uncommon. The famous Clos de Vougeet viueyard, from whence comes the wine of that name, is the largest in that district, yet it only contains 120 acres, much of which is poor land and unfit for use. The famous Chamberlin vineyard is just twelve acres, and the Romance Conti vineyard six and one-half acres. The Richebourg, Corton, Tache, Romanee de St. Vivant, Nuits, Volnay, Pommard, Beaune, Vosne, Chambolee vineyards are all in the Cote d'Or district on the southern exposure of a ridge of hills less than two miles long; in fact, the whole famous Cote d'Or district is only thirty-six miles long and less than a mile wide, and contains thousands of vineyards."

The before of Varney Gaskill, Secretary of the Railroad Commissioners, shows that the total miles of roads in California, reporting to the Commissioners in 1888, were 3,441, of which, 2,988 were broadguage, and 453 miles barrow-guage. This shows an increase of 317 miles, or 9 per cent, over the preceding year. There were thirty-four roads incorporated during the year—twenty-one in Los Angeles and San Diego counties. The property accounts of the companies show a footing of \$343,511,940.

The largest sailing vessel afloat was launched last week at Port Glasgow; she is a four-masted iron ship, named The Liverpool, of 3,300 tons register, being 125 tons more than the Palgrave, hitherto the largest sailing vessel. The Liverpool will carry 5,000 tons of cargo, dead weight, on Lluyd's freeboard.

A recipe for figs à la créme, described as a choice table delicacy, is thus given: Take the best figs, split a dozeu, but de not divided them. Heat them thoroughly hetween two plates, and just on the point of serving put on each a dessert-spoonful of whipped cream. According to American Notes and Queries, in one of the wine cellars of the Rathskeller, at Bremen, there are twelve large cases of wine, each case containing "the celebrated 'Rosenwein,' which was deposited there in 1624. One case of this wine, containing 204 bottles, cost 500 rix dollars at that time. Taking all expenses into account and compounding the interest, a single glass, one-eighth of a hottle, would cost about \$300,000.

THE Malags grape crop is short this year, and only 150,000 barrels are coming to this country, in place of the 300,000 barrels the twere expected. A single storm destroyed 100,000 barrels of the fruit. The crop of native fruit was so large that the Malagas will not be missed.

In answer to the aunouncement made by the Director of the Agricultural-Experiment Station in 1887, there were received applications for 3,992 packages of seeds and plants, and the material on hand permitted the distribution of 3,082 parcels.

ROBERT BARTON, the prominent raising grower of Fresno, has just returned from Earope, and Messrs. Forsyth and Butler are now en route for the "Mccca" of all wealthy Americans. The latter geutleman will visit Spain for a graduating course in the process of raisin curing.

The ranch of Eli T. Sheppard, consisting of 400 acres near Souoma, ar., including a winery, distillery, and 80,000 gallons of wine and braudy, was recently sold to Senator Hearst. The deed does not state the correct consideration, but it is thought the price paid was \$80,000.

WHOLESALE MARKET,

Quotations given are for large lots to the whole sale traie.

CALIFORNIA RAISINS.

Halves, Quarters and Eighths. 25, 50 and 75 cents higher respectively than whole box prices.

London	Lav	rs,	choice p	er bo		\$2	00@	
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 $\begin{array}{c} \text{CANNED GRAPES,} \\ \text{Grapes, Muscat, } 2^{1}_{2} \text{ fbs. \$ 1 } 10@ 1 \text{ 50, Galis. 4 50c} \\ & 3 \text{ fb, tins} \quad 2 \text{ 25}@ 2 \text{ 45} \end{array}$

Sugar Quotations,

California Sugar Refinery price list dated January 3d; Circle A. Pat Cube, 67%c Circle A Crushed, 67%c; Fine Crushed, 73%c; Extra Powdered, 67%c; Dry Granulated, 61%c; Confectioners' Circle A, 63%c; Extra C, 53%c; Golden C, 5c; Star Drips Syrup, in bbls, 171%c; hf do, 20c; 5-gall kegs 25c; 1 gall tius, 35c per gallon.

Price list of the American Sugar Refuery dated January 3d: Extra Fine Cube, in bbls, 6% c; Circle A, Crushed, 6%; Fine Crushed, 6%; Powdered, 6%; Extra Fino Powdered, 7%; Dry Granulated, XX 6%, Dry Granulated, 6c; Confectioners' Circle A, 6%; Extra C, 5%; Golden C, 5%, American Golden Syrup, in bbls, 20c per gallon.

Subscribe for the MERCHANT.

THE WINE EXCHANGE.

Opening of the New Headquarters of the Vittenitural Commission

A large gathering of people interested in viticulture assembled in Platt's Hall on Tuesday morning last, to witness the ceremonial opening of the permanent exhibit of California wines.

The hall has been renovated and especially fitted up for its new use. Visitors assembled in the center where chairs were arranged for them. On the right hand are the offices; on the left the cafe where pure California wines are to be sold. All about on wire stands are wine exhibits and engravings and lithographs of grapes and wine-making processes. A patent brandy still that reaches mearly to the gallery attracts attention, while a vender of fresh grape must, or unfermented jnice, compels nttention to himself and his product This must is now being made by the Purity Wine Company of this city, who claim great things for this "grape cure," The juice is pressed from grapes which have been kept fresh by a process of cold storage.

J. De Turk of Santa Rosa, Vice-President of the Viticultural Commission, presided. On the platform with him were Mayor Pond, Dr. Harkness, Professor James Denman, Arpad Haraszthy, Charles Krug of St. Helena, George Husman of Napa, Charles Bundschu of the Wine Dealers' Association, and Executive Officer J. H. Wheeler, Mr. De Turk, after a few words of welcome, introduced Mayor Pond. That gentleman spoke of his purely theoretical knowledge of the winc-making industry, and expressed his opinion of the great value of the present project. Following him Mr. Haraszthy, the former President of the Commission, spoke of the growth of viticulture in this State, and of the object of the present headquarters,

Commissioner L, J, Rose of San Gabriel, spoke at some length of viticulture generally. The present project can only be successful through mutual forbearance and indulgence on the part of Commissioners and producers. In his judgment, present troubles in marketing grapes are due chicily to the fact that there is more production than consumption and not from any fault of dealers. He considered that possibly present troubles may be regarded as part of the education of the wine-maker. He expressed confidence that the industry will become one of the greatest in the State. The recent purchase of his place by an English syndicate was referred to, The company is finding its best market in England, and there Mr. Rose is confident is one of the best markets offered to California wine producers. The great need of sceping up to a standard of excellence was emphasized,

Mr. Krug in his remarks noted that while from different causes wine production here has been decreasing somewhat, the consumption is increasing and consequently better times may be hoped for by producers. He hoped the exchange would be a medium for causing harmony between merchants and producers.

Professor Denman hoped the exchange would be a place where samples and cases would conform in quality-a thing it had been difficult to secure. He considered good wine a valuable aid to the temperance cause, as a substitute for strong drink,

Professor Husman said the present projcct is the fulfilment of a plan which he Menchant we quote the following

had long had in mind. He he ped it would result in siding true temperance, for true temperance makes men happier and better. He referred to the fact that in 1816, he had planted vines, and considered them almost the beginning of the great industry. As a representative of the Department of Agriculture, he has been commissioned to secure a wine exhibit for the Paris Expo. sition, and he asks co-operation in this work from the various producers.

Mr. Bundschu and Mr. Wheeler also delivered brief addresses. After the exercises the cafe was well patronized. The hall will be open daily, and all interested in viticulture are invited to call there.

FRASER ELECTRO MAGNETIC PROCESS.

A letter just received from Mr. J. Pignet. Dijon, France, communicates the fact that the Fraser Electro Magnetic Process for developing wines has been submitted to a conference of the best experts in France with most flattering results. The letter states:

"The result of the examinations is a success for you and for your process. 1 consider the result of this meeting to be very important for us, because the experts gave their opinion on very different productions, i. e. wines can de vie and fabricated linners."

This process in the hands of the Purity Wine Company of California, is meeting with great success, and many viticulturists have already contracted to have their last season's wines treated.

THE PRESCH VINTAGE.

Edmund Vates says, in the World: "The French vintage last year was a larger one than has been since 1880, but it is rather disappointing to note that the yield was the largest in the southern districts, which produce the common wine of the country, while the Burgundy and champagne districts were badly favored, both as regards the quartity and probable quality of the vintage. It is true that the Bordeaux vintage is very much larger than it has been for some time, but, considering that more than 150,000,000 gallons of wine were imported into that part of France from Spain, the prospect of getting pure claret, as we call the Bordeaux wines, is not much improved. France has, since the appearance of the phylloxera, become a wine-importing country, for, while fourteen or fifteen years ago the imports were only 13,000,-000 gallons and the exports 70,000,000, the former now exceed 250,000,000 gallons, while the exports dropped last year to less than 50,000,000 gallons,"

DISTRIBUTION OF PLANTS.

E, W. Hilgard, Director of the agricultural experiment station of the University of California, has issued his annual bulletin announcing the distribution of seeds and plants. Applications should be made immediately as they are filled in the order of their receipts so long as the supplies last, Applicants are requested to send the amount specified in connection with each description, as there is no appropriation available to meet the expense of postage and packing. Among the descriptions which are of interest to the readers of the

Resistant Graps Vines Cuttings of the following species of Vitis can be laid: 1. Cinera, 2. Aestivalis, 3. Cordifolia. 4. Candicans, 5. Riparia, 6. Arizonica, 7. Californica, 8. Monticola, 9. Novo Mexicana, 10, Rupestus, 11. Vulpina, 12, Remancti 13, Spinovitis Davidin. Sent in lots of 10 of a kind. 10c. per lot, or a dozen assorted, 20c. by mail.

Fruit Tro Sciens, The University orchard contains answard of 500 named varieties of fruit, and our report of 1886 contains, on pages 130 to 140, tables in which are succinctly recorded observations on apricots, apples and pears, growth of tree and quality of fruit, time of ripering. keeping quality, etc. These observations cover a series of years and indicate that some varieties are worth a trial in other parts of the State. Applicants may order any of the varieties mand in the report, We do not furnish rooted trees, but seions for grafting. We do not send large quantities of any variety, because the object is to test varieties and not to furnish material for commercial propagations Send 10c, for each dozen ordered.

Olives, - Though several improved varieties of the olive are now to be had from our leading nurselymen, we have a lot of Nevadillo blanco which we will send to those who desire a few trees to experiment with. It is a medium sized olive of ovid shape, ripening early. Three plants to each lot; 25c per lot by express,

Mulberries .-- Cuttings of the following kinds can be had: 1. Multicaulis. 2. Alba, 3. Russian, 4. Downing's Everbearing, 5. Lhoo, 6. Nagasaki, Sent in lots of 10 of a kind; 10c. per lot, or 12 enttings assorted, 20c, by mail.

Dur's Madder (Rubia finctoria.) The report of the efficacy of ground madder root when applied to vine roots for phyl. loxera may induce some to grow the plant for experiment in that direction. The leaves are said to be good for forage. Seed in small packages; 2c. each.

Pyrethrum (Insect Powder plant.) -The Dalmatian (cinerario foliam) and Red (roseum) in 2-oz. packages; 2c. each.

All applications should be addressed to E. J. Wickson, Berkeley, Cal.

SEEDLINGS OF SUGAR CANE.

The sugar cane has been cultivated for so long a period that its native country is unknown. Bentham states that "we have no authentic record of any really wild station for the common sugar cane. "Further, according to the Kem Bulletin for December, the sugar cane so rately produces mature seeds that no one appears to have ever seen them. In botanical works the subject is often mentioned, but apparently only to restate the fact that observers in all countries " have never seen the seeds of the sugar cane." The authorities at Kew have been working at this subject for several years. It was felt that if a sugar cane producing ripe scals could be found, a most interesting and important line of enquiry would be opened for improving the saccha rine qualities of the sugar cane in the same way as that so successfully adopted with regard to the beet. Hitherto the sugar cane has been reproduced under cultivation solely by means of buds and suckers. The improvement of the cane has therefore been restricted to chance variations occurring at wide intervals, and probably escaping altogether the observation of the planter, next convention to be tested,

Now all this is likely to be changed. appears that at Barbados seedlings of sugar cames have been successfully raised by Professor Harrison, and among these seed. higs are several different kinds indicating hybridity of a definite sort, such as would he expected to arise from the crossing of different varieties. It is to be hoped this subject will be fully and clearly followed up as a definite field of investigation, In any case the possibility of improving so important and valuable a plant as the sugar canc possesses general interest,

LAND PRICES.

Replying to the off-repeated publication of outside papers that land prices in south California are too high, the Santa Barbara Press snys:

"The boom of two years ago inflated. the value of all kinds of properties, especially town lots, in many localities, but it is not true that the whole of Southern California was affected by it. There is good farming land advertised in this county as well as in other southern counties, for sale at from \$50 to \$100 per acre, that will surely double in value in a few years. To effect a sale the first requisite is to find a buyer, the price does not cut so much of a figure; this was demonstrated by the way much property sold in this section during the excitement of the boom.

"There is a great deal more land selling in California to-day than there was five years ago, and yet it is safe to say the prices average 100 per cent, higher than they did then. Buyers for farming lands in the great San Joaquin valley are numerous to-day compared to five or six years ago, yet prices have advanced 300 to 500 per cent, in that time, and a few years hence they will have advanced again, but lonyers will be just as plentiful. It is just as easy to sell a lot to-day in this city at \$1,000 as it would have been to sell the same lot six or seven years ago at \$200 or less. Property will sell when there is a market for it, let the price be what it may, but it will not sell for anything like its value when there is no demand."

THE PICHOLINE

In order to test the merit of the so-called Picholine Olive, Mr. Ellwood Cooper, of Santa Barbara, makes the following propositions to growers of the tree: That all those having trees in bearing pick the olives, being careful to weigh them from the pickers every day; then put some loose straw on the ground and cover with sheets or canvass, clean and without any smell. and not near any stable where the odors could come in contact. Dry them in this way in the sun, not over two inches deep, so that they could not mould or heat, After sufficiently dry to be shipped, send them by express to me at Santa Barbara. giving me the weight of the same when picked. They should be shipped between Christmas and the first of January. I ought to have at least two tons, 1,000 pounds, or not less than two thousand pounds,

I will agree to make them into oil, and if good, will put the same on the market and sell it, paying each party pro rata the not proceeds, which will cover all expenseand more too. I will only charge the act ual cost of putting on the market. I will keep a separate tank, made in the same way for the Mission, and will make an absolute test. I will take some of both to the

KRUG CHARLES.
Krug Station, St. Helena, Napa Co., Cal. Producer of fine Wines and Brandies.

SAN FRANCISCO SAVINGS UNION, 532 Caldornia atreet, corner Webb,

For the half year ending with 31st of December, 1888, a dividend has been declared at the rate of five (5) per cent per annum on terta deposits, and disposits, and one-sixth (1.146) per cent per annum on ordinary deposits, free of taxes, psyable on and after Wednesday, January 2, 1889.

LOVELL WHITE, Cashier.

The German Savings and Loan Society 526 Callfornia Street.

DIVIDEND NOTICE.

For the half-year ending December 31, 1888, a dividend has been declared at the rate of five and one-tenth (5 1-10) per cent per annum on Term Peposits, and four and one fourth (4½) per cent per annum on Ordinary Deposits. Payable on and after WEDNESDAY, January 2, 1889.

GEO, TOURNY, Secretary.



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Wooden Bungs, Taps, Plugs, etc., Oak Bungs, Soft and Hard Wine Plugs, Soft and Hard Tap Plugs, Wine Samplers, Bung Starters, etc.

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T. A. ROBINSON, M. A., President,

Portal B. Vineyard.

On account of ill health and obligation to change climate, I offer to sell, lease or give on shares, my well-known Burgundy Vineyard, situated S, W, of Santa Clara Ave; the best wine district known, containing 150 acres of level land, and planted in the best varieties. Fifty acres Cabernet; fifty acres Burgundy, and the other fifty acres in Semillon and Roussellunos, in full hearing or will be so next year.

To responsible parties will give contract for five or ten years. Cellars are equipped with the best steam machinery and distillery; 250,000 of cooperage, oak and redwood. The place must be seen to be appreciated. I am ready to give immediate possession, and will make a positive sacrifice. if applied for at once 150,000 gallons of choice wines of vintage of 1886-87-88, may go with the place if so desired.

Apply to

J. B. J. PORTAL,

West San Jose,

HERRMANN & CO., FARM FOR SALE.

Two hundred acres in Sonoma County, ten minutes drive from railroad station, Forty acres planted in the finest variety of vines. The balance rich river bottom, and rolling land capable of the highest cultivation. Several never failing springs and plenty of oak and redwood timber on the property. Good house, large barn, and out buildings. Scenery, climate and roads unexcelled. Good fishing and hunting in the neighborhood all the year round. One f the most elegant and profitable suburban homes in Northern California.

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GRAPE ROOTS AT REASHMALE RATES.

M. DENICKE, - - FRESNO, CAL.

Packed Figs for sale at Tillman & Bendel, Clay and Battery Sts., S. F.

The following is taken from a letter written to Mr. Denicke, by John Rock the wellknown nurseryman and horticulturist of San Jose:

M. Denicke, Fresno: DEAR SIR-The figs sent to me to San Jose are very fine, and nothing has yet been produced in California to come any way near them. * * Enclosed are orders for twelve additional cases.

Very truly, JOHN ROCK, San Jose, January 7, 1889.

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POR SEVENTY-FIVE DOLLARS THIS COLLEGE Retracts in Shorthand, Typewriting, Bookkeeping, Telegraphy, Fennanship, Drawing, all the English Branches, and Everything pertaining to unsiness, for six full months. We have sixteen teachers, and give individual instruction to all our quiple. Our school has its graduates in every part of the State, ;

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E. P. HEALD, President Three miles from Santa Clara Station C. S. Haley Secretary.

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P. V.V., Puntas Aronas	11	GR had barre's Work	1,016	1410
I W.& Co. Guatemala	1.7	Milmore West Control of the Control		135 (
V. H. La Libertal	John T Wright	That arol Was an	26	15.
M. M., Champerino	I rruc's & Uranta	Waters With Land	EO.	35
•				
Tetal amount of Wine.	36 mars and		1.797	81.847

TO MENICO.

J.M., Mazatlan		John I Wright	2	arras Wine		 54	 i
					-		

TO BREMEN.

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TO NEW YORK- PER SHIP ROBERT DIXON.

LCSto		Jan Cara A Co.	100 arres William	2, 1007	25 9 4
FZ&tn		Clarpy & Co.,	27 tarres Willer to transport	1,257	500
J.M.& College College			25 Carrolla William Control and	1,105	460
0		J Gim Hach & Co.	[D10 barn sWife and a continue	17.17-4.	2.672
A S & Co		V ~ 10 H	TORRESTE IN Water	4 797	1.9913
E B & J		Lac man & Jacobia.	[100] rrels Wincerer	19, 156	7.75
F A		**	1 3 form is Wine	3,706	1.150
A in diamond		**	30 tarre - Wine	1.3141	50%
CC in diamond		Kelder & Van Bergen		7.10-7	3.10
A 6			564 barrier With	2.451	1154
R D A Co		B Preyfus & Co	., 54th tarm 's Wine	24,759	\$4,1803
K & F		Kebler & Frehling.	BRI Larrely Wille	20.135	105,
11			39 'arr 's With	1.950	1.54-1
A V Co		C Schilling & Co	250 barre's Wine	11.827	4.7331
**		10	15 casks Wittern	1.616	611
Varivin		Barring r Bres	150 farm - A tr	7,125	2.971
A G & Co		A Greenbaum & Co.,	200 barress With	54,54(30)	33,347.2
14	I	**			
Total amount of	Wine.	13 mees and		102025	852 811

TO HONOLULU-Pre O. S. S. Co's, STEAMER AUSTRALIA,

		2 halfa iska Wing	bii	54.
м м	p. Carpy & Co	I are William	52	19
H J	Argad Haraszttiy	Tharres Wine	343	270
4>	**	67 kgs Witter	13:3:5	25
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**	49	Distance Withouse Committee		25
F A S	U whilling a Co	2 casks Wint	122	7.
W C P	B Dreyfus	5 h dr barrels Wine		
**	- "	THE KEZS With a service of	1,013	551
	+1	To some Water services and the		
E H & Co	Kehler & Frohlmg	[2] 1888 William and a contract [134	67
44		2 quarter-casks Wine	103	:31
1.0		125 Kega Winger v 111111 1 1 1	250	125
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G W M & Co	K. bler & Van Bergen	150 kigs Wine	750	GOO
**		125 ki 28 Willie	250.	200
G in diamond	Https://ge	155 kc29 W ne	5-010	637
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PER P. M. S. S. CO'S STEAMER SAN BLAS, JAN. 12, 1889.

man or or				
	C' > billing & Co	(150 barres Wine,	7,3371 \$3,55	ā
K T		It barrel Wine	400 3	3
11		2 barrels Wine	100 5	
K & F	Kobber & Frobbing.	220 Parrels Winc	11.175 5.70	
		50 Sarrals Wine	-2.500 - 1.50	41
A P)	Lenorma ditre	Literarrely Wine,	2,500 1,50 730 21	7 1
C V Co	B Dreyfus & Co	25 barn is With	1.219 63	
Million and a second and a second	J Gundlach & Co	25 barrels Wine	1.182 65	o l
A in diamond	Las binan & Jacobs	115 barrels Wine	769) 95	
				- 1
Total amount of Wine			24,866 812.58	9 9
the state of the s				

TO CENTRAL AMERICA

C.P., San Juan del Sur	F. Merkanian	participant to a consistence of	4100)	
B & P, Corinto	C Schilling & Co	2 Carre Witte	51	52
		10 - xora Wine		
A L, La Libertad		II case Wine		- 3
J M P, Ocea.	LL ti Steele & Co.	(10) cases Witte continued to		7.1
CAN, 0ces	**	ti mases With		29
J.M. Amapala		10 cases Wine		186
E T, Amajola		I kegs Wife	1~	10
Total amount of Wine, 8	if were and		502	×3335
			_	

TO MEXICO.

	2			
M.H. Magatlan	dington & Co.	pl builts arrest Wincomme.	1,	815
J.M., San Dlas	Meyer us	2 barrels Wim	1111	70
B F & Co, San Black, The The	may Bell & Co	House Wine	1.89	150
W. L. San Blas W. I	/XA17.1 ,	I charge Williams	2300	~~
CB, San Blas K 6		Loanic Witte	2311	774.5
Hi & co, Ionala cat		10 barrers With	1686	3:1:3
H B, San Blas Tha	tinb silwer & Color, and	2 345 Wm	!	he.
A V H, San Blas	3.4	Traves Wine,	1	32
C B, Nan Blas	PH.	Dracas Wase,	1444	172
A B & O, San Blas	84	11 kega Wine	64	69
A O U, Mazatlan	3.4	10 kings Wine con account of the	24911	11/2
R E, Tonala W L	coates rateo	To pres National and a series		12-363
V F, Tonala	**	Microsev Water		GO
R L, San Blas	5 P	2 ki ga Water	30	21
P.A.C. Mazatlan	**	United Witte Control of	641	12

DESTINAT: N	100	1 :	9.83.034	VALUE,
Universe re- Mexico Mexico Promit le consent Pro	May and Andrew May 1 and 1 a	 State of the State	2.48 1.24 82.5, 5 (08.1 1.20 1.00 1.16 1.246 (05.2 5 18.1 560 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.5	\$105 171 558 22,60 280 113 33 75 1,640 394 1,940 63 5
T_tal			14.870	97 1004
 Total shipmonts by P 	anan set of ere		Mars inner 85	

Description of the Blueberry.

P 5.736

The Blueberry is a valuable fruit, and it a reliable fruit to grow in our northern States where the more trader varieties of truits winterskill. It is perfectly hardy, having stood 40 degrees below zer ownhouts he wing any upiny to the most tander buds. It ripens in this latitude about the 1st of July, and is beene in clusters like currants; shape, round; reddish purple at first, but becomes a bluish black when fully ripened. The shape is quality to be most people delice us. It may be served with sear and er am or cooked sance, and is splendid for winter use. The plant so has to thoursh in all so its, and is a prolific bearer, it grows very stocky and makes a tick hedge. The shaning dark green leaves and the blue fruit making a ple ising centrast. The demand for the fruit is great, and usually brings 15 cents per quart. They commone bearing the first year after setting out, and yields a full crop the second and third year after setting out. They are propagated from suckers and root entiries. The plant is about the height and size of the currant bash, and very stocky, helding the fruit well up from the ground. Plants should be set in the full and spring, in rows two or three feet apart, and five or six feet between the rows, making a perfect hedge, and no grass or weeds should be allowed to grow between rows.

PRICE LIST:

1 Dezen Plants by mail, 60 cents. 100 Plants by Express, 2 Dozen Plants by mail, \$1.00 1,000 Plants by ex. or freight \$15,00

How to send Money - I would prefer to have money sent by American Express How to seed MONEY—I would prefer to have money sont by American Express order, all sums of \$5.00 and under, cost cally 5 cents, and forder a less, money will be promptly refunded to sinder. If not convergent to obtain express order, money can be sent by registered by the registered

Plants are carefully packed in damp mess and delivered to express or freight office,

for which I make no extra charge. Address

Granito de

DETOS STAPLES, Portland, Ionia Co., Mich.

FANCHER CREEK NURSERY, FRESNO, CAL.,

OFFERS AN IMMENSE STOCK OF

Fruit Trees, Grapevines and Ornamental Trees. SPECIALTIES:

White Adriatic Fig. Ten Tested Varieties of Table Figs, Olives Pomegranates, and also a Fine Collection of Palms. Roses and Oleanders,

17 A five-pound box of White Adriatic Figs sent by express to any address on receipt of \$1.50. Send for Fall Catalogue and address all letters to

F. ROEDING, PROPRIETOR, FRESNO, CAL.

OFFICE: 303 BATTERY STREET.

CAPACITY SIMBLEMAN Galle



Wines treated under the Araser Leetro M guette Process, developing New Wines in thirty days, equal to three year's maturing under the old system.

R J HARRISON, President.

THE GRAPE OF ALMERIA

Wm. B. West of Stockton, in an article on this grape says:

This is the grade that is seen in the Eastern markets in the fall and winter, grapes, packed in cork dust. It is grown near a little seaport on the south-eastern coast of Spain, about cleven hours by steamer, from Malaga. As this grape appears to be grewn most successfully in this particular locality to the exclusion of other famous vineyard districts, (for it has been tried at Malaga and found to be unprofitable, the grapes not being so large nor having such good keeping qualities), it would be well to note the characteristics of this locality.

Almeria is situated at the mouth of a river, or what was once a navigable river in the time of the Roman occupation say two thousand years ago, but now filled with debris, with only a rush of water in the winter; it flows through a very hilly country having only narrow hanks with little bars and choice warm spots, where this graps thrives wonderfully. It is trained on trellices ten or twelve feet high and is said to bear heavy crops.

These then are requisites for the production of this grape; a warm climate, moist sandy soil and long pruning.

I was in Almeria on the 15th of September, 1878; the floors of the warehouses were full of grapes piled two to four feet deep; gaugs of women and boys were preparing them for shipment, which consists in cutting out every unsound grape, and packing them in casks of 25 and 50 pounds with cork dust. In size they were on an average much larger then our Emporers or Ferraras; in firmness and keeping qualities no grape can equal them, as we often see them in market as late as March; but as to flavor they absolutely have none. I was surprised as I had imagined that they might have been eatable when fresh and that the contact with cork dust injured their flavor; but I believe that they actually improve by keeping. Notwithstanding the inferiority of this grape the value of their export some years ago, was three quarters of a million dollars, a large amount going to the United States.

This grape has been introduced into this State and widely distributed, but I see no mention of it in the papers and I suppose it has not generally proved a success. 1 will give my experience and the experience of a party whose land is so different from mine, the contrast is interesting.

My soil is a strong clavey loam with a dry subsoil producing excellent table grapes. My Almerias are only medium in size, being about as large as the Ferrara; they are firm and keep well and are a sweet, good eating grape. I have some of them now in good condition, that were picked the first of November; no extra pains were taken with them, they were packed away in a hox. The other party has a sandy loam with a wet subsoil (a river bank. His grapes are larger than mine, not se good in flavor and later in ripening, so late that the froat usually destroys them; they are more productive than mine, when ripe the keeping qualities are about the same, from this I judge that his soil is more suitable than mine, but being in a frosty locality his grapes are not profitable. We have then to select a sandy loam, and a locality free from early fall frosts, as the grape will ripen about the 1st of November.

As to profit in growing them, except in the right place, there is none, but with the

proper conditions. I think a crop can be secured. My vines have borne an average of ten pounds each. The grapes are worth at least fifty dollars per ton, not a very profitable investment but better then wine

EARLY GRAPES.

The remarkable earliness of the lake region of Tulare and Kern counties has been intirely overlooked, says the Delano Herald. Nevertheless this section has advantages as regards earliness not shared by any other part of California. For several years past it has been well known that Stokes valley, in the northern part of Tulare county, produced yearly the earliest peaches-carlier even than Vacaville, From the first mentioned valleys the earliness appears to be on the increase the farther south we go, but begins to decline shortly before reaching Bakersfield-undonbtedly due to the sudden increase in elevation of that part of the valley. Last sammer several articles appeared in our California papers commenting on the astonishing earliness of the Salt River valley in Arizona, Muscat grapes having reached Los Angeles from the above place in July. Here was then an undoubted rival to California so far as raisins go, and supposing no other drawbacks existed for the successful culture in Arizona. At that time no one in California had any idea that we had here an equally early district-the country comprising the plains of the north half of Kern and the south of Tulare county; and if the footbills also are considered the region extends considerably farther north. In Mr. Chauvin's vineyard west of Delano, Kern county, the grapes ripen in the end of June or before, and on the 5th day of July this year, Mr. Chanvin began to make wine of his Zinfandel grapes. The Zinfandel grapes, as I can testify to, were rather over-ripe, and should have been picked a week or ten days before. The wine is of an exceedingly dark color, full-bodied, but perfectly sound and clear, with plenty of tannin. Perfectly dry and with no trace of sugar, this Zinfandel claret, made the 5th day of July, is a grand wine, especially for blending with lighter wines, though any one desiring a full-bodied claret may prefer it unmixed. A region that will produce over-ripe grapes in July needs no eulogy from me. I only wish to call the attention of the vine and fruit grower to the same. With this region in fruit and vines, California can extend her shipping season of fresh fruits for Eastern markets fully six weeks.

CLARIFYING.

Clarification writes Eugene Deltrikh, in Neuas Pharm, Manuale, is a process by which any solid particles suspended in a liquid are either caused to coalesce together, or to the medium used for clarifying, that they may be removed by filtration (which would previously have been impossible), so as to render the liquid

One of the best agents for this purpose is albumen. When clarifying vegetable extracts, the albumen which is naturally present in most plants accomplishes the purpose easily, provided the vegetable matter is extracted in the cold, so as to get as much albumen as possible in solu-

addition of cellulose, in form of a fine magnia of filtering paper. This has the further advantage that the subsequent filtration is much facilitated.

Suspended particles of gum or pectin may be removed by cautions precipitation with tannin, of which only an exceedingly small amount is usually necessary. It combines with the gelatinous substances better with the aid of heat than in the cold. There must be ne excess of tannin used.

Another method of clarifying liquids, turbid from particles of gum, albumen, pectin, etc., is to add to them a definite quantity of alcohol. This causes the former substances to separate in more or less large flakes. The quantity of alcohol required varies greatly according to the nature of the liquid. It should be determined in each case by an experiment on a small scale

Resinous or waxy substances, such as are occasionally met with in honey, etc., may be removed by the addition of bole, pulped filtering paper, and heating to boiling.

In each case, the clarifying process may be hastened by making the separating particles specifically heavier, that is, by incorporating some heavier substance, such as talcum, etc., which may cause the flocculi to sink more rapidly, and to form a compact sediment.

Clarifying Powder for Alcoholic Liquids. Starch......20 "

Reduce them to very fine powder, and mix theroughly.

For clarifying liquors, wines, essences, etc., take for every quart of liquid seventyfive grains of the above mixture, shake repeatedly in the course of a few days, the mixture being kept in a warm room. Then

Powdered talcum renders the same service, and has the additional advantage of being entirely insoluble. However, the above mixture acts more energetically.

A REMEDY FOR IVY POISONING

Poison ivy, while it is very poisonous to some, is entirely harmless to others. Actnal contact with the plant is not in all cases necessary to poison a man. Persons are known to have been poisoned by simply passing by places where the vine grows abundantly. Those who are not familiar with these plants will on general principles do well to avoid any vine or bush growing by rocks, fences and woodsides with glossy leaves arranged in trees, and in the fall any particularly brilliant tree in swampy places, with leaves resembling, but slightly broader than the common

Fortunately ivy poisoning is not a dangerons affection, although persons severely poisoned present a very distressing appearance. No scars or permanent injury to the skin or general system are apprehended in ordinary cases, and no danger of catching it by contact with the eruption upon another person need be feared.

The bruised leaves of the common plaintain are an excellent antidote and always convenient. Rub them over the eruptions and bind them on if possible. Fine table salt often effects a cure. Applications of soft soap sometimes afford relief. Sweet oil is one of the surest and most agree-Egg-albumen may also be used. The able remedies. Bathe the irritated parts ity of the secretive organs.

effect of albumen may be increased by the frequently with the oil. Aleading physician speaks in high terms of sulphate of soda as a remedy; prescribes it for his patients, as he knows its value from personal experience. As to his own case, he was completely covered with the poisonous eraptions, and tried all the old and new cures without any good resulting from them, until one day a drug clerk gave him 10 cents worth of sulphate of soda, dissolved in one pint of water, with which he bathed the parts freely. It acted like a magic; it allayed the itching and was very soothing. The cure was complete in a week. Sulphate of soda can be obtained at any drug store, but in ordering, it will be well to state that it is sulphate of soda, and not sulphate that is wanted, otherwise there is a possibility of getting the latter, which will not answer the purpose.

GRAPES AS A MEDICINE.

Recent investigation and experiments, remarks the Vineyardist, have proven the grape to combine more health-giving and curing properties than any other fruit known and so marked have been the results in the care of both special and chronic diseases that in Germany several establishments have been erected under the title of "Grape Cures," It would, indeed, bs a boon to our people, who are classed as a nation of dyspeptics, if several of these institutions were built up here; and where on this Continent, could such an institution be more pleasantly or judiciously located than on the shores of our beautiful lakes, Kenka or Sencen?

[Why, South California, of conrse.-En.] Combining, as they do, purity of air and water, charming scenery and surroundings, and above and beyond all, the ripening to perfection of nearly every grape grown Quoting from the late Dr. Hall, (author of several prominent medical works and the editor of Hall's Journal of Health), on the healthfulness of the grape, he says: "H the seeds of grapes are - awallowed, costiveness is obviated; if the pnlp is eaten, it is pure nutriment and is soothing in irritated bowels; if the pulp and seeds are removed and the remainder chewed, there is a liquid obtained from the skin which is a valuable astringent, and if eaten as a whole by the dyspeptic one half an hour before each meal, in quantity of one-half to two pounds, it is almost a certain cure for the most aggravated form of this disease.

It is a fact, beyond question, that grapes are enten by the old and young, from early morning until late at night at all times, in any quantity and under all circumstances. and yet who has ever known a well-anthenticated case of sickness arising therefrom? Testimonials from reputable persons living around us con be readily obtained of the permanent cures of many diseases, such as dyspepsia, chronic diarrhora, debility, nervons prostration, loss of appetite, from their

All know, or should know, that the liver is the great scavenger of the human system, and when that is inactive or torpid, disease in some sort manifests itself. Fruit, and particularly the grape, aids in promoting the liver's activity, their acids purifying the blood and separating the bile from it, which is then passed from the system, thereby securing a perfect action. In view of these facts, it becomes almost a duty incumall, particularly parents, to enbent upon courage the consumption of the grape among themselves and children, and all of the grape who are troubled with dyspepsia or inactiv-

KICKVILLE HEARD TROM.

A correspondent signing himself "West New York," in Bonfort's Wise Circular, waxes indignant over an article which appeared recently in the 11.07, in which the writer advocated a plan who reby the pur wines of California can be largely advertised by means of the State Wine Exchange, and the standard of such made familiar to the general public. "This," he goes on to say, "is a commendable object and should receive the hearty support of every honest wine grower and dealer everywhere, but almost in the same breath to advise the use of methods to adapt them to the trained taste of Englishmen is at best a little peculiar, considering the wholesale condemnation further on in the article implicating nearly every first class hotel and wine dealer in the East. The writer also proposes a scheme of sending men East to expostulatwith these hotel proprietors who sell cheap, poor and adulterated California wines and to denounce the obdurat dealer who supplies them. This might be a pleasant amusement, but, to make it effective, much of this surplus wind could be utiliz d as a school of practice at home. The pot's calling the kettle black is no argument, and to charge that the great bulk of east ra wines are fraudulent, even naming the localities where produced, Missouri, Lake Eric and central New York, is an insult to intelligence, and exposes the ignorance of the writer. There are dishonest men everywhere, even in California, and when her people have eradicated from within her borders all dishonest practices, then with good grace she can turn her attention to other States and localities. The admission of her people, the long list of importations o' the staff used in fabricating wines, such as prune juice, anoline dyes, etc., entered at the Custom Honse at San Francisco, the enactments of her Legislature, all testify to the fact that methods other than honest have been practiced there. From nowhere has Congress been so earnestly importuned for free spirits as from the people of Califormin; free spirits to fortify their wines. The matter was pressed during an entire 8 ssion of Congress by a prominent California lobbyist, liberally furnished with all the requisites in that line. This same gentleman induced many of the custern wine producers to join with him in urging Congress to pass what was called a Pure Win-Bill, to eradicate the evil complained of, but these men soon found, after spending considerable time and money, that the real milk in the cocoanut was the Sweet Wine Bill-free spirits to fortify them. However, I this discussion go on; it will do the honest producer - and there are many, both in the East and California -no harm, People are not fools; they soon learn to select the good from the bad. I assure the gentlemen west of the Rockies that when they earnestly wish any legislation at the hands of Congress to protect houesty in the wine business, not alone in California, but everywhere, they will have the hearty support of many eastern wine men, but, the sooner they learn that they are not the big I, and all others the little you, the caster things can be righted.

abstract of title in the world has been completed in Los Angeles. It contains 15,000 pages, and was executed for the Bancho pers, long avenues of this beautiful tree, San Jose and additions, including Pom- but the vineyards, the pride of Anthe imna, Lordsberg and other towns,

THE RAISIN CENTER

Fresno county is pre-eminently the raisin center of the United States. Meade & Co's fourteenth annual review credits Fresno county with having produced in 1888, 115, 000 twenty-pound boxes. The books of the railroad company show that the shipments have amounted to 534 313 boxes. At a low estimate the home consumption has been sufficient to bring the letual prod uct of the county up to a round 540,000 boxes. Membe estimates the product of the State for 1858 at 915,000). If we correct his estimate of Freeno's product the output of the State will be brought up to 1,040,000 boxes, which we think is very nearly correct.

Thus it will be seen that this county alone produced 510,600 boxes, while the product of the entire remaining portion of the State was about 500,000. It is a noteworthy fact that the shipments increased from 313,215, box sin 1887 to 534. 313 in 1885. In connection with this we may state that the Rebublican's estimate of the shipments for 1888 was 450,000 boxes Our figures were looked upon as unreasonable by many of our exchanges, but the facts show that they were very reasonable, about 90,000 box's less than the actual yield. Our estimate was much more nearly correct, in fact, than those of Meade & Co., who are practical vineyardists and raisin packers. If the actual figures have been determined upon in other sections of the State we would be pleased to obtain them. The raisin business has proved a sprofitable that the acreage is rapidly increasing, and no doubt Fresno will continue to be in the future as it has been in the past, the great raisin center of California,-Fresno Rebub-

THE VINE DISEASE.

A queer theory is advanced for the palvealence of disease among the vines in Southern California by a correspondent of the Analoim Gazette. It says: "I say during my recent visit to Anaheim, that the vines have aimost vanished, having died from some cause not yet discovered. I have an opinion that the large number of pepp r trees now growing all over the country have something to do with it, 1 may be wrong, yet it might do good to inquire into the matter. I herewith give you my reasons for the sam . Ov riwelve years ago I planted some vines on the south side of my home on Palm street. Thy grew splendidly, and the second and third years we had some very fine graps s. I had also planted some pepper trees, which grew beautifully, as you now so them. After the third year the vines gradually declined. They were well attended to, an expert did the annual trimming, but they bere few grapes, and what there was of them were not fit to eat. About soven years ago, who is I last saw the vines, they amounted to nothing, and at that time I considered the papear trees as the probable cause of the destruction. I saw when I visited Analism a week ago the minieuse number of pepper trees grown up, some to a v ry large siz , and the idea occurred to me that in the popper tree vine-growers might have to lock for a solution of the problem. There were very few pepper trees twelve years ago, IT COVERED THE EARTH.-The largest The vineyards were mostly sarround d by willow f nees or nothing at all, while now von find anywhere a large number of pepwhere are they?'

The Guide of a Che mich notices the exhibits made at some of the horicultural mont. We talk about the very great adshows in October, of a new vegetable which has been preulivation for the two years past in France and England.

It really consists of the tub rous rodstock of a spicies of Stachys known provisionally as S tuberifies, and closely illaid to the Wennelwork of our hedges. Its culture is of the easi st-in fact, in the ing more is requisite than to place the tubers in the ground, as we can testify We threed some of ours in the open border last autumn, whilst other tub is were grown through the winter in a pot in a cold frame, and planted out in spring Neither the one nor the other received the slightest att inton on our part, beit in spite of that, our carelessness was rewarded as it ought not to have been, by an abandout crep. In flavor, when heal d, it is something between a Jerusalem articlede and a boiled chestnut. We have not doubt, that with proper cultivation, we shall have a vegetable that will be of great's rvice in securing variety at the dinner table, though we cannot pr tend to look upon it as in a than a deliesey of relatively little value as a food crop though the profesion with which its tub is are formed, and the east with which they may be muitiplo d by using each joint as a "s t," may possibly give it some value in this respect

It requires only little experience of what a French cook can do to for see the variety of ways in which such an artist wood dishup these dainty little tubers. We may expect, us usual, some prejudice to aris at first sight, indeed, we have heard of some people objecting to them on the ground of their resemblance to caterpillars. The resemblance is not very close, but we all know how obstructive such projudie's are. We may add that the specimens we griw without manure or care of any kind, were not only aband arrand delicate to the tast. but when dug out of the grean lw i of a silvery whit mess, reading in a min relegree the pearly lastre of bream or what

The skin is so thin that washing only is required before cooking, and no peeling is necessary.

NATURAL DRYING

The enormous fruit crops of California. observes the Softer Farmer, have called into life a great canning industry, which will soon, if it does not already, excel that of any other State in the Union. Fruit is thus rendered imperishable, and can be transported to the furthermost limits of the earth. But while selling our fresh fruits the United States, where they can produce in limited quantities to our ewn crass and to Eistern consum rs, we had almost the gotton our drying facilities that electroned same the entire product of the nat nor in the prehards where they are produced, and bling thus rendered imperished; and iduced in bulk, can be drawn rossy inceto transportation lines, and also, like

wood, coal, oil or any fuel is required what- clse.

The fruits need only to be spread sun and allowed to remain untouched until dry and ready to be packed for shipvillages of the wheat-growers of the State. but they are not to be compared to those result by the fruit grow r who dries his fruit.

As we contemplate the business we can so platforms made of wood or cheap material stretch d along the rows of trees to be dri d, and in from three to five days taken up ready for the market and replaced with another complement. If the climate and consequent improved machinery of California can force the wheatgrowers to the wall, the natural California fruit-dry r can force all the competitors ov r the "wall," no matter how cheaply he gets his laber. Men talk about overproduction of fruit, with the hundreds of conterns and "all creation" as a drierit is impossible. As to a market, our kinds, varieties, qualities and exclusiveness give us the whole world for a mar-

THE BANE OF CALIFORNIA.

The Large of California has been speculation and a desire and expectation in too many of its people to get rich suddenly. This spirit has led too the creation of unbeauthy beems, and too a parrow spirit which set different parts of the State gainst each other, each jealous of the all i's growth and prosperity, as though there was not "enough to go around." Chilf quin has the richest soil and finest innate in the Union. Not the half is yet known of its resources. The State can side at 6,000,000 of people in comfort and happiness. But they must be workers and not speculators; men who behave thema lyealike the rest of mankind who have to arn their bread and butter by the sweat of their brow, " as our contemporary well says. The California farmer is probably the happost of his calling. If is rightly called th " golden farmer." Nature deals with rim mer kin'lly than anywhere else in Christendom, -Ex.

SMALL PRUIT HOLDINGS.

In a recent all less Professor Hilgard of the State University expressed the follow ing estimate of California vine and fruit growers and their interist. "I don't think that any country on the continent will ever compete with California for grapegrowing and was -making. In the raisin and ware industry I do not think you will have any competitors. In other fruits we have. There are certain other localities in truits as well as in California. New Jersoy, for instance, can problem a large amount of peach's, but it is viry small is compared with California, and would car rouly a small portion of our foothills. At I I amphatically assent to the proposito u that a commandty of fruit grow r may him and truts cultivated and a sparse anned fruit, will go to the concern to proposition, but necessaris of rich men and to ry country.

It is worth while, then, to be keeper as your most be exceptionally intelligent and and make such discoveries as the merest has solidy I think, intelligent and edunovice may see for the leaking. Our cat i, I think this industry conduces warm, char, rainless and dowless sammer, chain ntly to education, and to small holdclinate cays to our State fraitshyon the mas, which necessarily bring about a deentities copyed by no other country in it of popular intollig nee and education earth. No artificial dryer is needed. No which it would be difficult to find anywhere

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HINTS FOR THE PLANTER.

The following hints from a correspondent of the Templeton Times will prove of value to the new beginners in the fruit and vine industries:-

As the season for planting trees and vines is at hand, perhaps a few hints from one who has had six years' experience in this county may be of interest to some of your readers. In the first place, scene from some reliable agent or nurseryman, good, healthy trees that have been grown without irrigation; one-year-old or yearling trees

Healthy, thrifty stock, in putting out an orchard, is one of the essential requisites, Have your hard will cleared of trees and brush, plow deep, not less than ten inches, and deeper, if possible; lay it off in rows twenty feet each way for all kinds of trees. except apples and olives; they should be at least twenty-five or thirty for apart. Grape vines not less than eight feet, ten is better. On most of the lands in this county a hole large enough to admit the roots without eramping is sufficient; on extra heavy soils a large and desper hole would be better. Carefully cut off all bruised roots with a sharp knife, with a slanting cut from the under side upward; set them about the same depth that they were in the nursery. Be particular about straightening out all the small fibrous roots and fill in with pulverized soil, pressing it down quite firmly, leaning the tree a little toward the prevailing winds, which are from the south and southwest. After they are set out, if they are yearling trees, cut them back to within sixteen or eighteen inches of the ground; if they are two years old, this out the top to correspond with the roots that have been destroyed in transplanting. All the buds from the ground up will start to grow on those that you have cut back. Leave from three to five of the top buds to form the top of the tree, and rub off all the others after they have started in the

Shade the bodies of the trees for the first two years as a protection against the borer. I do it by wrapping them with old cotton cloth that has done service as sheets, pillow-slips, dress skir.s, etc.; tear it in slips about two inches wide. Commencing at the lowest bud that you have left to form the top of the tree and wrap it spirally to the ground, dig away the earth a couple of inches below the surface, then r place the earth and it will hold the cloth in plac . The second year, when the body of the tree begins to grow, it will burst the cloth, and after that there will be shad chough from the top to protect the trunk of the tree. Shading or wrapping the trees can be done any time in the spring hefore hot weather sets in. It is a good plan to mulch their during the spring with damp coarse or wet manure, the ground under the mulching retains moisture much better and remains at a uniform temperature during the summer

In setting out graps cuttings use a spade, digging a hole the size of the blade of the spade, both in breadth and d pth. It is not necessary to remove the duri from the lower half of the hole, loosen it up with the spade and run the cattings down into it, press the dirt down firmly and fill in, leaving only one bud above the ground. They can be set out quite rapidly in this way, and it is better than using a dibble or crowbar for that purpose. Ten or twelve inches is deep enough to plant them.

In putting out a vineyard in some scasons quite a large per cent, of the cottings will fail to grow. To insure a good stand it is safer to put two entings in a hole should grow one can be taken up the next senson and set out in some place where both the enttings have failed to start. In this way you insure a uniform stand in your vineyard.

H ading trees low is an essential point in putting out an orchard. They are less hable to be thrown out of balance by the winds, the trunks are not exposed to the sun, and when they come into hearing the fruit is more easily gathered. Thorough after-cultivation is of the great st importauce. When you have finished plowing and cultivating in the spring, run a clodmasher over the ground, leaving the surface smooth and well pulyerized. Allow no weeds to go to seed and success is sure to crown your efforts. Trees and vines can be set out in safety up to the first of March and I have had good succ as in planting them later.

We have a good fruit country here and there is no suier and quicker way of enhancing the value of our lands and developing our country than putting out orchards and vineyards.

The chy does well here, and he who plants an elive orchard now, will, in a few years, be repaid a thousand fold for his

PHONOGRAPHIC JOURNALS

Thomas A. E.lison's phonograph is to be applied to furnishing a talking daily newspaper, necording to the Noc Fork World. To obtain the news the subscriber will have to turn the crank and listen as the news is reded off. Sometime ago Mr. Edison succeed d in turning out what he calls phonograms, which are of a preuliar waxy composition, and can be folded and put in an envelope, like a letter. When the message which has been tracid upon them is to be made audible they are wrapped around the phonographic cylinder, and by a revolution of the motor, the sounds of the voice are produced. It is said that 20,-000 or more of these correspondence phonograms can be turned out in an hour, and that they can be adjusted to any phonograph. The discovery is said to have suggested to the inventor the plan of utilizing it for a talking m wspaper. The phonograms will contain each day the latest news in a cond-used form, and will cover cachsubdivision such as the cable and telegraphic, political, dramatic, commercial, etc., each being marked so that the heurer may choose. If a new open has been produced the night before, for instance, he can listen to a criticism of it, and enjoy the novel sensation of hearing the choreest passages of the music precisely as they were rendered at the thiater. Any matter of news which embodies the speaking of one or more 1 o ple can be reported so that the phonograph subscriber can imagine hims, it present and listening to them. It is not expected that the talking newspaper will achieve all its possibilities at one; the design at first being to provid merely a synopsis of the daily news, which will be furnished to sidescribers so that they may hear it while at brenkfast. It is stated that whereas formerly the phonograph was only within the reach of the wouldny, it will seen be brought so low in price that people of moderate means can possess one. The phonograms, as now made, wonot cost 20 couts a cylinder but as they are perfected the price is expected to be much lower.

THE DESPISED SICIAR.

a good entomologist, and the farmer and 4, the brook (2, the Narragausett; 3, white; about four or five inches apart, and if both gardener make a great mistake in present. I. black; 5, buff 6, state. The largest of ing and destroying this hundle little and the bronz turkeys, raised principally mal. The few eggs he purloms from the farmer's hen yard very poorly compensate. Connecticut, attain 45 pounds in weight for the great number of nex one insects be destroys. In May be is sometimes seen, about sundown, on some clevidal spot tend r, usually weigh about 25 pounds, watching for the May beetle as he wheels. The Narragansetts are nearly as large, and his drotting thight, and he say shim, to the tothe late 8 nator Anthony used to raise a in the sense spoken of in the immortal elegy, but between his teeth. He will set an hour at a time gathering in the distructive boths. Ho is a persistent hunter, time, and in his necturnal rambles moves along with his nose close to the groun, ; his sens of smell is so wente not an insect, let a pap rin the State, larva, above ground or h low, can escaphim; his eyes now glow with unusual brilfiancy as he scans every leaf for the hidden prey. About tobacco plantations his ser vices in destroying the tolacco worms ar considered valuable.

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It concentrates and diminishes the locs

It concentrates and diminishes the lees, leaving a larger quantity of pure wine.

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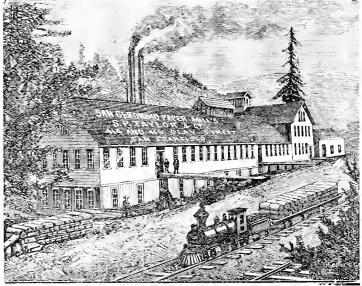
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SAN FRANCISCO, FEBRUARY I, 1889.

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ITALIAN VITICULTURE.

CLETIA ATION AND PROBLETION OF THE VINE, WITH CHARACTER ISTICS OF WINES.

An Interesting Account of the Wine Industry, furnished by the Gen eral Datian Wine Grawers' Association

Continue I from pag. 1 30.

SOUTH ADDITATES.

The Southern Adriatic region comprises two groups of provinces which entirely differ from one another as regards their agriculture. The first group includes the provinces of Teramo, Chieti, and Aquinla, which constitute the Abruzzi; to the second group belong the provinces of Foggia, Bari, and Lecce, which form the Puglia; Campobasso is a province situate between the two above. Although they are less alcoholic than those named groups, and partakes of the nature of Puglia, of both

From a viticultural point of view the Abrazzi are very different from Puglia as to the quality produced, the systems pursued, as the district possessed the advantage of a and the cost of production.

The Abruzzi forms one of the most monntainous provinces of the kingdom. On the Adriatic coast are steep hills which continue inland until they j an the Appenine chain, and it consequently possesses a large numvarious elevations.

The culture of vine commences on the narrow coast of the Adriatic sea, and is carried on in the hills up to 100 metres above the scale vel.

Owing to its mountainous character the Abruzzi has a humid climate and an unequal temperature, which explains why such a variety of wines are produced here.

In the Abruzzi the system of extensive culture of the vine is very old; it is cultivated with other herbaceous crops, as is generally the case in the central districts of Italy, However, there ar some districts

is coops, this bong a practice which jthought a southwat I to coordinate at his the winter climate

The wines produced in the Abruzzi intable wines of various degrees of strength Pugga. and color, and finally fine lottled wines which quickly develop an excellent bouquet.

The vails v of the river Pescara, and especially the districts of Popoli and Tor de-Passeri, produce a style which, as we shall show, is more properly obtained in the the blending win s which in some parts of the Abruzzi possess a very intense color,

The wine production of the Abrazzi, developed and found ready mark t as soon railway line which united her with Rome and the North of Italy.

In this district new plantations are not so rapidly increasing as in Puglia, becausthe annual exp us s of culture here are greater, the prices of the sines are comparber of valleys and table-lands exposed at atively moderate, and the complete and regular ripening of the grapes render them very suitable for distant transportation.

In Pugha, which is entirely different from the Abruzzi, the greater part of the by the cryptograme maladi s which are vineyards are situated on an extensive plain. Poculiar to the vine. Howe, Pagua, much slightly undulating, and, is a rule, only a more than any northern region, passess s few metres above sea level.

Murge, Minervine, Spinazzela, & ., although at a moderate elevation, deafter the general characteristic of the Pugna broant date, in quite news. To mith livery sine culture, which is essentially a cultiva- first, the most execusive system of cultur tion on the plant.

This district is one of the driest in Italy, which have an exclusive culture on trellis, and in the summer season the rainfail is trade required, noney, this work; and this system of culture is very very small indeed. If such a condition is rapidly increasing. The small amount of not favorable to berbaceous crops, it possible had wire, vacially nor be ming with manure which is produced here being prin- sesses, many advantages for some shrubs, infetier as leight 4 to to s cipally used for the lemon, orange, and and trees. For centuries the previnces of alive trees, has compelled the people to L coe and Bart have formed the centre of teneractically awak to 1 the a fixity of the plough down into the soil green crops as the olive culture. Some ten years ago the country, lift have also cause the manner of

grees better results her that in the north but what has counted in record years a rn countries on ac's unt of the mildness of red, at transferm that in the agriculture of Puglia, is the extended entirement of the Apple, which only thirty years ago was almost dule all the qualities which are produce the stricted to a small area round Barbitta, trict of Barbitta, and a portion of the in the more northern provinces. Very light together with ouverind aimend trees. But white wines are produced, which are con- when the Burl trawings began to be used ties of wine are sent to Barn Brindisi, contrated in kettles for making a special in Naples and the North of Italy for strengths. Gallig light and Taranto for shipment, and wine for local consumption only called Vino lening and improving the color, and giving Cotto; among the other wines produced are body to light and inferior wines, the cultivathat known as Cerasuoli, which is obtained attion very rapidly increased, in the district by mixing black and white grapes), red of Burktta and afterwards throughout

The reason why the vinc culture her acquired a development not to be compared. with that of any other It stan region, is inpartially to climatic influences, which enables the vine to be cultivated ad arberelia without any supports ; partially to the Southern districts; we shall also speak of fertility of the soil, which gives an abindant production for many years without the aid of manures, and also the decrease in the profits derived from the cultivation. of the olive and almond trees and extrals, as well as to the circumstances that the taglio in English, mixing wines a finally, which was already considerable, rapidly vine may be cultivated on sail which had there are other districts which produce Red proviously been unproductive.

We do not mean to say that Pugha can continue for many years to cultivate the vine without giving it manure in any form. but for the time boing, here, and we might old, in the three regions which follow, also considerable and steady production is obtained, notwithstanding that the vines are planted very near each other and no manure is given. Morever, owing to the dry climate of this r gion, it has the advantage of being cossibility to be damag a natural conditions which are favorable to The recent cultivations on the hills, called this cheap production of wines. As ther advantage favorable to the vine culture in not I had in is, that the vin var is ar was adopted, very few varieties of gripes were introllect, and these easy what the due bay by strong a greater death, and full

This to rate a alternshive a time manure for horticultural and other herba- almond was extensively grown there also, from of workers and capitalists. For it nors,

From h. German, and Swiss' have estabashed larg. In to at Barletta, Barn, Brinlist, and Disciplie, where they select and store the win sof Pugha for exportation,

The largest or diction is that of the disalpoining district of Figgi. Large quantimiany thousand casks are also carried overland.

As regards the quality sof the wines, we coust say that the district produces blending wines which pessess that degree of alcohol, color, body, and flavor, which satisfy the requirements of the trade perfectly,

In the common a of Trani. Andria and Can say which are close to Barletta, the win a cannot in strictness be classed as 'd in hing wines but they are generally treated is such. Contingent to these districts are locality's where the wine, a'though used for blending purposes, contains a smaller proportion of alcohol, color, and body, and are known to the trade in Italy as Mezzo Table wines, although always v ry strong in account of the alcohol and color which they contain.

In the district around Gioja del Colle and Altamura, a special relatable wine, possessing a viry I licate hou just, is produced on a large scale from the Primitivo variety,

The white wines, in comparison with the I, are of very little importance, they are produce I at Sans, v. ro. Luc. ra. and Bitonto they are sold partly as pr. luced and partly blanded with strong real wines, as common table wines. The grovers of Frani, Barletta to prepare as a speciality a sweet wine called Mes are which however, is frepointry to rich in sigar, and cluid not

At the extr a suit of I read Otrante every vanish who is proper I from the Zigir sigrip shit a yin ismil friatity

The high prices who helicity be in obtained since the vintage of 1885, and the ready has attract I to, attention of the proper to reinit as rigion to the mic saity of rapely in resing the pentations. They aght now to divide their altention to inand suprace their s cann t b

having good and agreeable table wines from this country is, that they are wanting in the acidity which constitutes the chief characteristic of the wine of the Northern districts. Science and experience have, however, suggested means whereby this difficulty may be overcome.

As to their chemical composition, the best wines of the Abruzzi contain 13 per cent, of alcohol, but the more common contain between 10 and 11 per cent, and in a few exceptional cases 9 per cent. The acidity is sometimes 5 per mille in blending wines from the valley of the Pescara, but more commonly it varies between 6 and 8 per mille, but wines which contain 9 per mille are by no means rare. The dry residue of the wines from the Abruzzi, varies, when prepared in the ordinary way, from 16 to 18 per mille. We have not given any figures as to the concentrated wines, as these vary in accordance with the quantity of concentrated must which is added.

The best blending wines of Puglia very frequently contain 15 per cent, of alcohol, but more generally 13 or 14 per cent., wines di mezzo taglio (miving wines) do not exceed 12 per cent., the table wines 11 per cent., and in a few rare exceptions, 101/2 per cent. The acidity soon after vintage is sometimes from 7 to 8 per mille, but as a rule is scarcely 6 per mille, and frequently 5 or 4 per mille. With regard to body, good blending wine possesses fully 30 per mille, which is a normal figure for the largest part of them; mixing wines do not contain more than 25 per mille, and table wines not more than 20 or 21 per mille.

An analysis of the special wines of Primitivo gave on 15 samples an average of 12-90 per cent. of alcohol, and 7:57 per mille acidity. The common white wines have from 10 to 13 per cent. of alcohol. The composition of the Moscati and Zagaresi, depends upon the extent to which the grape juice has been concentrated. The most agreeable have from 13 to 15 per cent. of alcohol, and from 40 to 60 per mille of dry residue, including sugar. If the natural concentration of the grape juice has been such as to cause the wine to contain 90 per mille or more of dry residue. then the alcoholic strength does not exceed 10 or 11 per cent., and these wines have more the flavor of honey, and become too heavy.

We shall now give the figures showing the average production; but before doing so, we would observe that they are the average for the five years from 1879 to 1883, and as the greatest plantations in Puglia have been during the last ten years, the produce ought to have considerably increased. It will be sufficient to give one instance. Besides what was retained for home consumption the province of Bari, in the year 1871, exported 168,630 hectolitres of wine, while in the year 1886 it exported 978,440 hectolitres-upwards of five and a half times as much as in the earlier year.

Province.	Annual average production between 1879-83.
	Hectolitres.
Teramo	550,900
Unieti	
Aquila	562,30€
Campronsso,	313 900
Foggis	643,100
Bari	1,552,500
Lecce	801,800
Average production for South	Adriatic 4,845,400
Districts.	Average production of Wine

	Districts.	Average production of Wine per inhabitant.
		Litres.
l'enne		236
reramo		202

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	Av	CE.	1	u	ì	D				٠)	2	4	
	Av. Cit Sol	ta	d	11	C	3	ı	e		٠		4	٠	٠	٠	٠										,																,	1	4	ŧ	
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Campobasao				٠.,					 :
beron Larino									 1
Average									-
Bovino Foggia									
Sansevero								• • • • •	 11
Average	for	the	P	rov	ince	of	Fogg	ia	 18

Barletta		• • • • •	•••••		• • • • • •	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Average	for th	ie Pr	ovince	ef Ba	ri	199
Brindisi Gallipoli				· · · · · · · ·		
Levec						183
Taranto						

Average for the Province of Leece . . . 145 General production for Southern Adriatic 167

It is rather difficult to give a list of growers and merchants in the Abruzzi who are able to provide a direct regular export of their products. In this district very few proprietors produce from 200 to 500 hectolitres. The greater part produce between 50 and 200 hectolitres. At Citta S. Angelo, Torre de' Passeri, etc., it is possible to find growers of more than 1,000 hectolitres, but it is also customary here to sell the grapes. The most important establishment which can in any way be recommended for quality and good orgagization is that of Senator Giuseppe Devincenzi, of Giulianova; an establishment which, besides having a good sale for its wines in Rome, also, to a certain extent, exports them to Lucerne, Munich, etc., where they are much appreciated by consumers. Messrs. De Luca of Ortona a Mare export their wines to foreign coun-

In Puglia the growers are more important; some producing 10,000 hectolitres annually, and many over 1,000 hectolitres. The small proprietors are not so numerous as in other regions. With special regard to those who have well organized establishments, we may name:--

Giuseppe Pavoncelli, Cerignola, owner of three establishments.

Duke of Larochefaucauld, Cerignola (genral agent, Leon Maury.)

Enopolio Sociale, Lucera.

Trefiletti Bros., Foggia.

Marquis G. Curtopassi, at Bisceglie, Muccis, and Pozzo Sorgente.

Pietro Bucci fu Giulio, Minervino, Murge. Sottani Stefano, Corato.

Società produttori Patroni Griffi, Capano & Debendictis, Corato.

Baron Giuseppe Patroni Griffi, Corato. Azzariti Saverio, Corato.

Comm. Nicola Gioja, Corato.

Giovanni Jatta, Ruvo.

Fione & Incomo Bros., Bitonto.

Vito de Bellis & Co., Gioja dal Colle.

Patroni Griffi De Laurentus, Santeramo

Giuseppe De Bellis, Castellana.

Giovanni Beltrani, Teramo.

Fedele Cavallo, Carovigno.

Crosti & Borsa, Brindisi.

Many firms, some of them foreign, undertake the charge of buying, blending, and sending wines to foreign countries; the principal are:-

L. Combés, Leehman & Meister, Crobot & fils, Emanuele De Feo, Picon, etc., at Barletta; Mastaller, Hausmann & Co., Videau & Brnn, Wehrlin, Scarpelli & Co., to be filled, leave a depression about the A. Berner, Seitz & Zublia, etc., at Bari; vine to be filled as the plant grows, remem-Average for the Province of Teramo216 Pietro Antoniazzi, at Nardo.

VINEYARDS.

The Importance of Cultivation and Care during Early Growth.;

[Vineyardist]

The soil for a vineyard on which, to-Average for the Province of Aonila. 159 gether with the planting and care for the first and second years of growth, depend the early and alundant returns to remunerate the vineyardist is of the utmost importance, for, if proper attention to the early life and vigorous growth of the plant be given, the first substantial crop should not be later than the third or fourth year, depending upon the variety planted. But if farm crops are grown during the first and second years, especially during the latter, the first crop will be necessarily delayed until the fourth or fifth year, and this will not be satisfactory. In preparing the ground, it should be plowed deep and well, and if a sub-soil attachment is at hand that will follow the plow, loosening up the ground five or six inches deep in the bottom of the furrow, it will be of great advantage to the plant; and to facilitate planting, the lands should be plowed just to the width of the rows apart, to wit: eight feet, and plant the vines in the dead furrow, which will require very little digging for the hole in which to plant the vine, which should be set at least twelve inches deep below the level surface of the ground in ordinary soil; and if the soil is very light, deeper still. The cultivation during the season will fill up the dead furrow, and by plowing towards the vine in the fall the dead furrow is changed to the center or between the rows. Stubble or land cropped with corn or potatoes, if treated with subsoil as above, would be improved; and when fitted, can, as in the other case, be laid out by drawing a wire on two sides of the field at right angles (a linked barbed fence wire, with the barbs cut off, is the best) with a mark in the wire every eight feet; drive a little stake or peg down at each mark over the whole field, which will then row both ways, and then run a plow furrow close to the peg across the field, letting the peg stand, and by crossing the opposite way with the plow, leaving the peg standing, very little digging will be required, and the plant can be leaned up against the peg in planting and the rows will be exact in all directions. PLANTING.

> Great care should be taken to have this work done well, as this is the important thing in order to secure a good thrifty vinevard from the start.

> The long, woody roots, if one year old, should be cut back to six or eight inches. according to the size of the plant, before taken to the field to have them ready.

The roots should not be allowed to get dry; in planting, put the plants in a pail with sufficient water with a little fresh cow manure added to it to keep them wet, then the planter should set it properly by spreading the roots in the hole just prepared by for the purpose, filling in, with his hands, surface soil about the roots, to the depth of two or three inches, and then take the next, and so on, to be followed by another who will pack the earth down about the roots. in so doing, filling the holes with the plow, leaving the top huds out of the ground and if the plant is too short to allow the hole bering that after heavy showers they should should be placed three and one-half fee i

be looked after at once, to see that none are covered with earth that has washed over them, nor any washed out, as is sometimes the case.

Train to one cane, keeping off the laterals for about a foot or more above the surface of the ground, and, after that, let it grow as it will for the first year. Before the plant is set, scatter from a basket in the bottom of the hole a couple of handfuls of grape food which should be covered with two inches of surface before setting the plant, so the roots will not come incontact with it. Great care should be taken in the use of commercial fertilizers, many vineyards having been ruined by the too liberal use of them; after planting, a eopious rainfall washing it down on to the roots and destroying them, but if below them and covered they will find it and take what they want, and no more. The following fall or early spring, bone meal, a good grape food, unleached wood a hes, or muriate of potash, sown broadcast and worked into the soil is, without doubt, the very best fertilizer you can give a vineyard. After the vineyard is established, an application once in two or three years. will be sufficient. It is quite as important to keep the soil stirred after the vine is planted, as it is with the hill of corn, keeping the ground loose and moist, and allowing no weeds to choke the vine; if the soils is rich, potatoes or tomatoes can be grownbetween the rows of vines the first year,. but after that, no crop should be allowed, as what can be grown from any other cropwill by no means compensate for the sacrifice of the vinc. In case of a drouth the first year, cultivate your ground thoroughly and often, and a couple of forkfuls of haifrotted barnyard manure placed about the vinc will serve at the same time as a mulchand fertilizer, and secure a good vigorousgrowth, even should it be very dry, and this should not be neglected, as losses occasioned by drouth, or any other cause, makethe vineyard irregular, and are disastrous to the best success of the same for severalyears. It is better during the first summer's growth to drive a small stake down: by the side of the plant and tie it up a couple of times to keep it up and away from the harrow or cultivator, and in the fall, after the leaves have fallen, to prune back: to two or three buds. Train to single carte, twelve to sixteen inches above the ground and then let the laterals grow; and, in early fall, drop the vine from the stake and plow shallow toward the vines throwing a little earth over the vine, first putting aforkful of rotted manure around them, if you have any.

This method will furnish a good, safe

protection for the winter, during which time the material should be obtained for the trellis to be put up the following: spring. The plan which is rapidly growing in favor with practical vineyardists and which is adopted in many sections, where strong growing varieties are cultivated largely for market, giving better satisfaction1 some other person, or persons, designated than any other method previously tried. and which we recommend, is as follows: Posts made of either chestnut, oak or cedar, white or red, are used and cut long. enough to be six feet above ground, after being set two or two and one-half feet in exercising great care not to injure the plant | the ground, according to soil and location. The end posts need to be braced so as not to settle over and loosen the wires which are stretched from post to post. The posts should be set thirty-two feet apart as a general rule. The first, or bottom wire,

from the ground, and the second, or top wire, two and one-half feet above the first wire-always running the rows north and south if practicable. The two wires will be found perhaps sufficient, although some prefer the third, dividing the space differ ently. The first two feet from the ground, and the o her two, one and three-fourths feet apart. Both of these plans are for the Koiffin system of training the vine. The wires must be drawn as tightly as they will bear, so as not to stretch and sag down under the weight of fruit. No. 12 annealed iron or steel wire is used, galvanized or not, and can be bought at two and one half to three cents per pound at our hard ware stores. The wires to be fastened to the posts with a staple driven in firmly and the posts should be five to seven inche in diameter. It will be readily seen that by setting the above posts, equally distant, beginning on the same line, the field will be divided into sections, and the space be tween the end post in one section and the end post in the adjenning section will I ave a space for a roadway, which can be of any desired width by proper planning in laving out the field; and when fields are feuced in there should be space enough for roadways around the outside for convenience in gathering the crop. Sharpening the posts and making a hole with a large post-bar when the ground is soft in the spring, or boring a hole with a post augor smaller than the post, and then driving the post down with a manl or sledge hammer is a very rapid and effectual way of putting up the trellis and makes the post set very firm. The young vine should be uncovered in the spring as soon as all danger from freezing is past-often times vines that have been covered with earth or manure during the winter are left covered so late in the spring as to destroy the buds -and, as soon as the ground is in condition to work, fill in all vacancies with strong plants, so as to keep the vineyard as nniform as possible.

The main object in having the trellis up the second year is for the purpose of getting the vines well established with the nccessary arms for producing a crop of fruit the third year, which can be easily accomplished with thorough cultivation again the second year, and with proper attention to the training of the vine, which is as follows: Confine the new growth to one cane (the stronger is always selected), which is carried perpendicularly to the top wire, where it is turned off to the right, say, keeping off the laterals, and allowed to run along the wire for three feet or more when the end is pinched off, the effect of which is to cause the vine to throw out laterals again, one of which is saved-that nearest the upper wire-and train on that to the left and so in a like manner two are saved for the lower wire, 'orming two arms for that, one to the right, and the other to the left, and all other laterals to be taken off. These will be required to be tied to the wires to keep them from being broken off, and with care to keep the first caue upright, the vineyard will present a fine appearance with no unsightly cloows in the main cane. On account of the theory advanced by some that the best clusters tend toward the end of the vine which will soon be found on the upper wire only, which is only in theory, and not proven by practice, they suggert, to which there is no objection that this can be obviated by letting two upright canes grow instead of one; the one having one arm to the right on the upper, while the second cane will have one arm to the wires, like twigs of willow, which can be the stones are broken, or the same effect is paper in the State,

right on the lower wire and one arm to the left on the upper, both of which are on the renewal plan-

Another plan for a trellis (where, by reason of the extreme cold winters, the vines require to be laid down and covered), is as follows: Post and wire as above, with three horizontal wires and posts five et ab ye ground. The first wire two feet from the ground and the other two, one and one-half feet apart each, and the vine trained all one way. The advantages are First; the fastenings can be cut in the tall and drop the vine down on the ground to cover with the plow or other covering, dso getting the benefit of the snowfall. Second, by driving the horse, in cultivation, next to the row the way the vine runs, and back in the middle of the row, there is no danger of breaking off the new growth. his method might be found a protection for the young shoots in the exposed places, subject to winds, running the vine with he wind when practicable. The main sine and fruiting wood is fied to the first ind s cond wire and printed, tying the new growth to the upper wire and dways rubbing off the buds above he top wire, thus the vincs will run bout the same. Marks across vines judicate where to prune, which should be lone in the fall, in order to harden up the wood. In case it is not convenient to put up the trollis the second year, and the purpose is to adopt the Kniffin system, this can be done by training the second year's growth to the three cames, pruning these in the fall to about three feet and fruitmg the two outside canes, using the middle cane to grow your arms for the next year, and cutting away the two outside canes after fruiting. During the second year, while shaping the vine for future cropping, the ground should be thoroughly cultivated, by first plowing away from the vines in the spring--not too deep, say four or five inches-and with the frequent use of the cultivator and harrow the vineyard can be kept free of weeds, and the soil loose and moist, save that the use of the hoe will be required under the trellis, occupied by the vines beyond the reach of the cultivator or harrow, which will be very slight if the work of planting and setting the trellis is properly done-being so straight that the space, if any, left for the hoe will be very narrow--stopping all cultivation, however, by the first to the middle of August to give the wood time to ripen before heavy frost. At the close of the season, after the leaves have fallen, the vines should be printed, with due regard to the ability of the vine.

A safe rule to adopt, will be to prune these four arms back to six buds, at the end of the second season, theing the main cane to both wires, and the arms at the onter ends, which is one of the advantages of this system, being a great economy of time and labor over the old system, which requires the ticing of almost numberless new growths-and some of these for several times-requiring patience and experience to do well. Equally satisfactory results can be obtained without it, by the system recommended, as stated by practical grape growers of large experience along the highlands on the Hudson, who have adopted this system in preference to all others. The management and training of the vine are somewhat different the third year from the second. The new growth or fruit bearing canes, are made to hang down on both sides of the trellis, from both

done by one man taking one side, passing produced by mixing up the mass with hollalong rapidly, pulling them loose where the tendrils bind them, and so let them sway in the wind, giving them air and light, and the fruit hanging undermeath is free for picking, not being bound in by the vines, and if these cames grow sufficiently long to reach the ground and interfere with cuitivation, the ends are removed reachly by cutting or twisting off. The only summer pruning needed, is to break out the saperfluous shoots at the base of the fruit-b-aring vines, giving the strength of these for the perfecting of fruit and fruit-hearing arms for the next year's crop, which will be laterals that grow out at the point where the arm is connected with the main upright cane, which, let grow unchecked, hanging down the same as the fruit-bearing cam, they will make four laterals to be brought up to the wire to form new arms to take the place of the old arms, that will be cut away at the next pruning, This will be the same each year afterward, growing a new fruit arm for the next year's crop, to take the place of the old arm to be cut away each year, and the new arm to be cut back to eight or nine buds the third year, which will provide for all the fruit the vine can sustain.

DON'T BE TOO AVARICIOUS,

Most varieties of grapes are prolific beaters, and quite liable to suffer injury from overbearing. Cure is necessary in the tr atment of young vines in this regard. It may do no harm to leave one or even two clusters when the vine is in its second year; but at no age of the vine, should more fruit be left to mature than it is able to carry through safely. If allowed to overbear, the fruit will be inferior, and the constitution of the vine so impaired as, often times, to require years to restore it to its former vigor and productiveness. One of the evidences of over bearing, even in a healthy vine, is a feeble growth of fruit wood while carrying its heavy burden for the next year's crop. Eight to ten pounds is quite sufficient for a strong vine the third year and twelve to fifteen and eighteen pounds, according to the size and vigor of the vine, for the fourth year, With the Catawba and Concord, if the large clusters only are left, they will ordi. narrly weigh from one-half a pound to a pound and more each, and by this method is given the quantity the vine is carrying.

OLIVE OIL.

The olive is extensively cultivated in the south of Europe, solely for the sake of the oil, which is obtained from its fruit. This is a small green oval berry, containing a a hard stone, in which are two seeds. The fruit must be gathered before it is quite ripe the olives are spread on the floor of a room, and left several days to dry and to ferment slightly; they are then crushed in a mill, and then put into bags made of rushes, or of coarse canvass, which, being subjected to pressure in a screw press, the oil flows out and is received into proper vessels, which are half filled with water, on top of which the oil floats and is easily skimmed off. Where the process is carefully performed, the stone of the berry is not broken when the fruit is first put into the null, the null stones being set far enough apart to avoid doing so, and the oil first drawn off is of superior quality, After all this is expressed, the mass, stones and all, is either returned to the mill, and

ing water and increasing the power of the press; by repeating this operation, not only a second but even a third quality of oil is obtained. The best oil is made in the neighborhood of Lucea, Italy; that consumed in England is produced principally in Tuscany or Naples, though a great deal is also brought from Spain, and some from the Iobian Islands. In this country, as an article of food, it has been heretofore treated as a luxury, and principally used by the middle and upper classes, however, all classes are being educated to the fact that it is a very desirable article, both as a food and a medicine.

The following facts in regard to it are so well narrated by the Frenchman, Bertile, that we quote them: "Rich in azote, and with considerable nutritive qualities, olive oil possesses in the first place, the power of assimilating with the human body. It is instrumental in assisting in many medical cures where the method is entaneous. It being more liquid than an animal fat: always used for that purpose, it is easier to absorb. The injured parts, protected from the air by the cily substances or salves, heal more quickly. These nuctions give, besides, more suppleness and clasticity to the muscles. As it is not penetrated by the poisons in the atmosphere it is used with success in counteracting the deleterious miasma around swampy districts. Taken daily by the spoonful, it is an excellent laxative to the system, and not tiresome to the stomach."

In the countries which produce the olive, the oil constitutes a large proportion, in some way or other, of the food of the people, and is an absolute necessity.

The refuse of olives, after the oil is obtained from it, is given to hogs to fatten them, is burned as fuel, or used as a manure, The unripe fruit is also pickled in salt water, dayored with some spice, and is caten in many countries as a relish. It is also largely used on the European Centinent to improve the flavor of certain wines.

"The touching story of the flight of the dove from Noah's Ark, related in Genesis, proves the existence of the olive tree in the earliest period of the world's history. It was a celebrated tree among the ancients. It held the first rank in their mythology, Minerva taught the Athenians how to prepare the fruit, and they had a most religious respect for it. The Romans used the wood not only as fuel, but on the altars of their gods; it was the emblem of peace,"

PROSPEROUS STATE - The Illinois Bureau of Labor reports that one-fifth of the State is blanketed with mortgages, bearing interest at an average of about 7 per cent., which have been placed not for purchase money but for loans, while nearly one-fourth of the total acreage is mortgaged for deferred payments. The mortgage indebtedness on land alone outside of Cook county Chiengo), and not including railroad indebtedness, amounts to \$121,-000,000, an increase of 13 per cent, over the aggregate mortgage debt of 1880. This compares with an inercise of 6 per cent, in the decade following 1870. The total debt including Cook county, equals \$112, 100,000, The Chicago News and Trebuca both prediet that the next census will show a great decrease in the farming population of the

THE MELCHANT IS the only viticultural

POISONS IN FOODS.

At a recent meeting of the Newark (N J.) Medical Association, Dr. August Drescher, chemist to the New Jersey Board of Health, read a very interesting and instructive paper on the detection of mineral poisons in articles of dict and common use, which is condensed in the Analyst as

follows: Chemists have found lead in canned foods over and over again, the lead being generally supposed to come from the accidental dropping of some solder into the contents of the cans while these were being closed, or the food, on being extracted from the cans, coming into contact with the solder. In samples of canned tomatoes and peaches, I have myself repeatedly discovered lead, and the scrapings of the inner tin-coating of their containers have invariably given evidence of the presence of that metal. Tin and lead may be al loyed in almost any proportion. The melting points of these alloys never agree, as might be supposed, with the mean of melting point or hardness of both metals, but quite the contrary; they diverge rather widely from the mathematically calculated figures for the same. Of this fact, manufacturers of tinware are well cognizant. Tin and lead alloys are "more convenient and cheaper" than " plain tin." Doubtless there are manufacturers who do use pure tin, just as they claim, but they are certainly in the minority; thus, a number of our soda water apparatus makers now furnish tin pipe connections, etc., of pure tiu. Far be it from me to say one word derogatory to the honest standing and dealing of men so inclined. Canned foods are now more largely bought and consumed than ever, for obvious reasons. In our day convenience, cheapness and dispatch are the desiderata. Why cook fresh fruit, corned beef, etc., while you can bny them "all ready made?" It is only necessary to warm them, and you will have a "hot dinner" in less than no time, and a cheap one at that time. The oft pointed out danger of lead poisoning is poohpoohed. Who ever died of eating canned foods? Directly, no one, it is true; and right here lies the danger. Had sudden deaths occurred from such a source, the public would doubtless have been aroused, and the resulting panic would have soon brought the delinquent to the corner. Lead, except in very excessively large doses, never kills at once. In point of fact, it is the Judas of metallic poisons. "Under the mask of a sweet taste," as the famous Professor Stoeckhardt very fittingly puts it, "it slowly, insidiously, yet surely, does its deadly work!" Bottled drinks (soda water, ginger ale, sarsaparilla and other "soft drinks," as well as wines, etc.) are exactly in the same predicament with "canned foods." It has been and is now a practice to clean old bottles by means of shot. Many authorities have, in the past and present, indicated the dangers of such practice, and, by conscientions pharmacists at least, it is safe to say it has been generally abandoned. Not so, however, with bottlers of wine, soda water or other drinks with whom this repreheusible custom seems still to prevail. Shot contains, I would add, a not at all trifling quantity of arsenic, which is another very undesirable ingredient. The use of shot for cleausing bottles ought to be condemned out-

in bottles with patent metal and Indiarubber stoppers. The analysis comprised may easily wear off, more especially by exmy work for three manufacturers. Some posure to acid or alkaline fluids, laying of these beverages were found to be defiled with lead and copper, one with lead and per, which will then be a source of conarsenic, and the rest, with one exception, were proved to be contaminated with lead. All contained tin, but this metal is not considered to be poisonous. The stopples themselves were examined. They are generally composed of a loop of coated brass and a tin (and lead) button with an Indiarubber belt. Analyses of them conclusively showed the presence of lead, copper, zinc and tin. These "soft drinks" are usually kept in boxes in "upside down" position, thus favoring access of the beverage to the tin stopple (containing lead), and though to a lesser degree, to the loop (composed of copper and zinc). The tin button with its India-rubber belt is thus, in constant, contact with the fluid, while this may suffer contamination by copper or zinc during the filling or emptying of the bottle, in cases where the conting (which is itself not unimpeachable) may have worn off more or

It is seldom, in our time, that we hear of metallic contamination of bottled wines or liquors. Suspicion rarely points that way, and examinations are consequently not pots, measures, etc., a thousand times. called for. And yet, this ubiquitous foe sends his unerring arrow from even this quarter. In the year 1875 I was called upon to assist in an examination of a red wine, which was su-pected of having been colored with aniline red. An afternoon birthday party of five persous had been attacked with vomiling and other alarming symptoms soon after having drank of this wine. Two of the number had been most severely visited by the distressing symptoms, and they were conspicuous as having been the "champious in the race," as far as relates to quantity imbibed. The host, a physician and pharmacist, puzzled, as might be expected, sent the rest of this wine to a chemist near by, with special directions to look for arsenic (coming from the suspected aniline). The chemist, a busy man, applied Marsh's test, and failed to find arsenic. He then referred the matter to me for further investigation. I also failed to find arsenic, but I tound copper and zinc in appreciable quantity, drink bottles with patent metal stopples, I have been informed, are now no longer cleansed by means of shot, better and more modern contrivances for the purpose being at hand. It is a well-known fact, that water, which has remained undrawn some time in our leaden aqueduct pipes may become polluted with lead, while oft-drawn water is not apt to be thus affected, it not finding the time to take up any of the metal. Similarly, shot standing under water, or being shaken up with it in bottles, may cause defilement; and this I have recently corroborated by direct experiment. As to the possibility of contamination of soft drinks in our usual metal stoppled bottles by means of the stopple itself there can be no further doubt. Dr. Wm. K. Newton, New Jersey State Dairy Commissioner of Patterson, has obtained-independently of my work (of which he knew nothing st the time) in this connection-results corroborative of my own. Later on, Dr. Harold, speaks of "lead in our soft drinks and in the tin metal stopples," in a paper contributed to our local board of health,

Boilers, measures or other utensils of During the summer I was entrusted with tinned copper, serving as receptacle or conthe task of testing "soft drinks" put up tainers of foods or drinks, need faithful fants' nursing bottle fittings, nipples, etc., ranch."

watching. If the tinning be of pure tin, it bare more or less of the underlying coptamination. If the tin carry lead, our bill of fare will not buil to offer also this unestionable luxury. The same applies to brass and lead forks, knives and spoons plated with tin, nickel or silver. Tinned iron pots, measures, etc., are apt to carry lead; but I have, so far, found it in traces only, often very minute even, probably because of the small amount of lead present in the very thin tin coating of these cheap contrivances. The same might, seemingly, apply to tomato and other food cans of tinned iron, but we must here remember that in these cases there is more or less prolonged contact of food with metal, this enhancing the metallic invention, opening these cans we often find them to be badly corroded on their inside surface, which circumstance in itself is loudly eloquent. Conversely, the tinned iron cooking dish, the measure, etc., are much less effected, they being used for the occasion, cleansed, rinsed and put by for future nse. Tomato cans, etc., are used for their intended purpose but once; the cooking

If clay, as found in the bosom of our mother earth, be not above our suspicion, we might at least expect to find it purified and suited to our uses, in the form of our familiar table pottery ware, comprising our coffice cups, dinner plates, milk pots, etc., these necessities of our daily life all appearing in our market of a milk-white color, suggestive in itself of purity. Even. here disappointment awaits us, however. Clay is porus; to make it serviceable as pottery ware, it is glazed. In the process of glazing or enameling, the chief agent employed is lead oxide. If this were chemically completely used up so as to form lead silicate, which is generally insoluble, not affected by acids, etc., we would have little to fear from this source. If, however, the lead oxide should have been used in excessive amount, or, what is equally noteworthy, the temperature in the glazing process should not have been driven high enough, so as to result in using up all of the lead oxide, changing it to the form of insoluble lead silicate, we would have to face the danger of lead pollution. Our cheap glazing and enameled clay ware is generally unsafe for this very reason. Extensive experiments made within the last few years by unquestionable authorities in Germany, lead to the conclusion that the common clay ware manufactured in that country, in very many cases yields lead by treatment with vinegar, hot or cold, more or less, according to the extraction method employed. The clay goods of our American market, according to my own observations, are exactly in the same predicament. While conducting the experiments on glazed ware, I came across many samples of our now well known blue glazed metal nots, etc., and I am ready to state that I have found them safe in every single case, they failing to impart lead to fluids acid or atkaline, even after prolonged boiling with them. European governments allow definite quantities of lead in glazed ware. It is even claimed that a certain amount of lead is indispensable in the glazing or enameling process; but the lead should never be present in soluble form.

of our market. I have found to contain large quantities of zinc, which is a metallic poison. The use of zinc oxide, etc., in these goods is prohibited by law in Europe, just as is the use of lead oxide. That nursing bottle tubing, nipples, teething rings, etc., may stand in some relatiou to certain infantile diseases seems plausible. India-rubber tubes are often used for siphoning wines, eiders and other beverages which might thus become polluted with zinc. It is noteworthy that in my examinations of India-rubber goods I have never yet discovered lead. Zmc oxide, per se, is not, perhaps, a poison. But, let it meet an acid, a poisonous zine salt will result.

Poisonous metals or their compounds in these preparations for external use are considered to be dangerous to health because of their liability to be absorbed by the skin, or even carried to the mouth inadvertently by the hands, with which they may have been applied. Many bair dyes contain lead in large quantity, as has often been found by chemists. White lead and calomel are regular ingredients in many of our toilet and cosmetic preparations. I have recently found white precipitate (a very poisonous mercurial compound) to be the chief constituent of a "cream facs wash," White precipitate and red precipitate, both of mercurial parentage, are often bought in drag stores for the preparation at home of ointments, etc., which are empirically employed. Not without darger, most assuredly. The general use and application of such powerful poisons had better be left to the discretion of the physician, he alone understanding the system and manner of their application. The conclusion of my remarks is this earnest admonition to the public. Be careful how. what, out of what, with what you dine and drink; be careful what you apply to your face, hair, hands, or any part of your

HISTORIC GROUND.

There is a bit of history connected with the Madrone Vineyards, which were sold by E. T. Sheppard to Senator Hearst Wednesday, which will be of interest to those not familiar with the incidents of importance in the early career of Sonoma county. The following extract is taken from . an article published in the Chronicle conceroing the sale: "There are 400 acres in the ranch, 200 acres of which are in a high state of cultivation, bearing fruits and vines. There is a magnificent park of 100 seres in which flourish madrones, from which the rancho takes its name, and other trees. The property lies at the base of Mount Ulope, just where its steep sides melt into the plain, and is about midway between Glen Ellen and the old town of Sonoma. The tract also horders on the Sonoma creek for about a mile. On the property is a large rambling country residence which has quite a history. General William T Sherman built a portion of the residence and lived there quite a time; it was the residence of General Charles Stone, the officer who was courtmartialed by Secretary Stanton for refusing to charge the enemy at Ball's Bluff, where the gallant Baker lost his life. Stone afterward became famous as a General in the armies of the Khedive of Egypt. Just below the Madrone Vineyards, which is also known as the Stone ranch, is the Hooker ranch, where "Fight. ing Joe" Hooker lived for a time. Mr. The India-rubber tubing, stopples, in Sheppard also owns a portion of that

HINTS FOR SMOKERS.

Tobacco contains an acrid, dark-brown oil, an alkaloid, nicotine and another substance called nicotianine, in which exists its odorous and volatile principles. When tobacco is barned, a new set of substances is produced, some of which are less harmful than the nicotine, are more agreeable in effect, and much of the acrid oil a substance quite as irritating and poisonous as nicotine is-is carried off. These tire-produced substances ar | called from their origin, the "pyridine series." By great and more aromatic and less harmful members of the series are produced, but the more poisonous compounds are generated by the siow combustion of damp tobacco. This oil which is liberated by combustion is bad both in theor and off et, and it is better, even for the immediate pleasure of the smoker, that it should be excluded altogether from his mouth and air passages.

Smoking in a stub of a pipe is particularly injurious, for the reason that in it the oil is stored in a condensed form and the smoke is therefore highly charged with the oil. Sucking or chewing the stub of a cigar that one is smoking is a serious mistake, because the nicotine in the unburned tobacco dissolves freely in the saliva, and is absorbed. "Chewing" is on this account the most injurious form of the tobacco habit, and the use of a cign holder is an improvement on the custom of holding the cigar between the teeth. Cigarettes are responsible for a great amount of mischief, not because the smoke from the paper has any particular evil off et, but because smokers and th y are often boys or very young men -are upt to use them continuously or at frequent intervals, believing that their power for evil is insignificant. Thus the nerves are under the constant influence of the drug, and much injury to the system results. Moreover, the eigarette smoker us a very considerable amount of tobacco during the course of a day. "Dipping" and "snuffing" are semi barbarites which need not be discussed. Not much effect is obtained from the use of the drug in varieties of the habit.

Nicotine is one of the most powerful of the "nerve poisons" known. Its virulence is compared to that of prussic acid. If birds be made to inhale its vapor in amounts too small to be measured, they are almost instantly killed. It seems to de. stroy life, not by attacking a few, but of all the functions essential to it, beginning at the center, the heart. A significant indientor of this is that there is no substance known which can counteract its effects; the system either succumbs or survives. Its depressing action on the heart is by far the most noticeable and noteworthy symptom of nicotine poisoning. The frequent existence of what is known as "smoker's heart" io men whose health is in no other resp ct disturbed is due to this fact.

Those who can use tobacco without immediate injury will have all the pleasant effects reversed, and will suffer from the symptoms of poisoning if they exceed the limits of tolerance. These symptoms are: 1. The heart becomes more rapid when tobacco is used. 2. Palpitation, pain, or unusual sensations in the heart. 3. There is no appetite in the morning, the tongue is coated, delicate tlavors are not appreciated, and acid dyspepsia occurs after eating. 4. Soreness of the mouth and throat. or nasal catarrh, appears, and becomes very troublesome. 5. The eyesight becomes poor, but improves when the habit is abaded doses. It should be remarked in this configrapes to the nergy with a value of \$20 a on the Pacific Coast.

liquor or some other stimulant is experienc d.

In an experimental observation of 38 boys of all classes of society, and of average health, who had been using tobacco for periods ranging from two months to two years, 27 showed severe injury to the constitution and insufficient growth; 32 showed the existence of irregularity of the heart's nction, disorder of the stomachs, cough, and a craving for alcohol; 13 had internattency of the pulse; and one had consumption. After they had abandoned the use of tobacco, within six months one-half were free from all their former symptoms, and the remainder had recovered by the end of the year. A great majority of men go far beyond what may be called the temperate use of tobacco, and evidences of injury are ensity found. It is only necessary to have some r cord of what the general health was previously to the taking up of the habit, and to have observation cover a long enough time. The history of tobacco in the island of New Zealan I furnishes a quite suggestive illustration for our purpose, and one on a large scale. When Europeans first visited New Zealand they found in the native Maoris the most finely developed and powerful men of any of the tribes inhabiting the islands of the Pacific. Since the introduction of tobacco, for which the Maoris developed a passionate liking, they have from this cause alone, it is said, become decimated in numbers, and at the some time reduced in stature and in physied well being so as to be an altogether inferior type of men.

TO CURE DIPHTHERIA.

Turpentine Said to be Almost a Specific to the Disease.

We have on several occasions referred to the use of thrpentine in diptheria, R conimended originally in Germany and claimed to be almost a specific, it was there, also, that the employment of the drug was subjected to the most severe criticism, Some recent publications have again drawn attention to the alleged value of this substance, and most remarkable among these is an article which appeared in the Therapeutische Monatshofte. The author asserts that he has employed turpentine in diphtheria for the last four years. In that time he lost only five cases out of sixty that came under treatment. Two of the fatal cases concerned infants, who appeared mornband when first taken, and died a few hours later. The other fatal cases were also unusually severe from the start, two dying in thirty-six hours, and one surviving five days. This is certainly a noteworthy record, as diphtheria statistics go. The oil of turpentine was administered in dram doses three times a day. Sw et spirits of inter was used as a corrective, in the proportion of one part of the spirits to fifteen of turpentine. Symptoms of intoxication were never observed by the author. In addition to the turpentine, a 2 per cent. solution of sodium sulyclate was given every two hours in tablespoon doses. A gargle of chlorate of potash solution was likewise employed whenever possible, Under this plan of treatment rapid amelioration of local signs and constitutional symptoms was observed. Usually improvement began at once, and it was rarely necessary to push the drug beyond five or eight

stimulating fluid diet (strong broth, port wine, mi'k) formed a feature of Dr. Roese's plan of treatment. Those who are inclined to be skeptical in regard to the utility of medicines in the severer forms of diphtheria (and the profession contains many such) will searcely accept the author's figures without a challenge. On the other hand, for the very reason that violent diphtheria ordinarily justifies so gloomy a prognosis, we are ever ready to employ any means which may possibly reduce its frighttul mortality. There is no reason, therefore, why the turpentine treatment of this disease should not be given a fair trial, Medical Booml

RAISINS

Few people in the East, says the New England teroor, comprehend the rapid development of the raisin industry of the Pacific Coast, of the acreage devoted to it. or the amount of capital invested, says the New York Tribune. A large proportion of consumers is still under the impression that Smain furnishes the entire product. John M. Chapman, whose firm has been appointed as agents of the California Drued Pruit Association, has given the Tribuna reporter one interesting facts about the management of this luxurious vine product,

Unlike the cultivation of grapes on the Atlantic sea-boards, or in the large vincyards of Ohio, the vines are grown without a trellis, being trained so that the lab rals curve over the stalks, thus protecting the fruit from the direct rays of the sun. The best fruit grows eles to the ground, shaded by the broad leaves. Fruit growing upon the laterals is likely to become sun-burned, and can only be used for making second quality raisins. The first crop matures about August 15th to 20th; the so-called second crop from September 15th to Octoher 1st. Vines begin to produce at the age of three years, and at six years are in full bearing. An impression prevails that raisins are made from purple grapes; on the contrary, the raisin grape is a translucent green. The principal variety used in California is the white muscat of Ab xandria.

The preparation of raisins for the market is a rather simple process. The branches are laid on trays exposed to the sun; evaporation begins almost immediately; after two weeks they are turned over, when the under side is cured in about one week longer, the grape assuming the deep purple tint common to raisins. Some of the bunches after leaving the trays are moist, others are too dry. To equalize the moistore and make the goods of uniform consistency, the grapes are put into sweat boxes holding about fifty pounds; there they remain until a proper condition of moisture is attimed. Then they are removed to packing houses, and the clusters are separated from the loose grapes and placed in boxes in layers, making what is known as the London layers of choice table fruit. Bunches that are too small for this purpose or are of a harsh texture are put note a steaming machine, from which they are automatically conveyed to a series of trays or sifters, making "crown" or loose raisins of several grades for cooking. Four weeks on the coast, from the maturity of the fruit, read r them ready for market.

Grape raising is profitable. A vineyard of good average will yield six tons of

doned, 6. A desire, often a craving, for nection, however, that a very generous and ton on the vines, or \$120 an acre. Old vincy ands produce from eight tons, and the fruit brings a better price than the product of younger vines, as it is better adapted to the larger or bunch styles of high price raisins. Thus a forty acre vineyard in full bearing, at six years of age would furnish a revenue to the grower of \$6,000. Labor. however, is high and growers have found it difficult to obtain a full complement of hands to cure, a crop, needing, such prompt attention. This difficulty will be lessened as newcomers thicken. California produces in quantities only the raisins that compete with the renowned Malaga varicties. The Pacific raisin crop of 1858 is expected to approximate 1,000,000 boxes. Some of this has gone abroad owing to the small crops of Malaga this year, and the latter fact will help to dis-(ribut - the domestic crop through America.

THE HOP OUTPUT

A circular issued by Robert Acheson, hon and commission broker of San Francisco, gives some valuable information relative to hop culture in this State.

Last year Alameda county devoted 115 acres to this plant and produced 659 bales, Amador, 3 acres and turned out 15 bales; Calaversa, 5 acres and 21 bales; K rn, 60 acres and 135 bales; Lake, 101 acres and 631 bales; Los Angeles, 15 acres and 134 bales; Mendocino, 1,049 acres and 6,276 bales; Moreed, 15 acres and 103 bales; Montercy, 17 acres and 194 bales; Napa, Hacres and 312 bales, San Joaquin, 107 acres and 681 bales; Sacramento, 1,081 acres and 11,173 bal s; San Mateo, 15 acres and 60 bales; Santa Cruz, 86 neres and 1,058 bales; Shusta, 12 acres and 41 bales; Sonoma county's output by districts is as follows: Forestville, 71 acres and 478 bales; Freestone, 9 and 26; Pulton, 81 and 513; Guerneville, 25 and 108; Healdsburg, 144 and 970; Mark West, 49 and 285. Petaluma, 22 and 126; Santa Risa, 464 and 2,888, Schastopol, 110 and 915; total-996. acres and 6,399 bales. Sutter, 55 and 900; Yolo, 315 and 2,537; Yuba, 230, and 2,447; total for the State, 1,417 acres and 31,085 bales. These statistics are simply estimates, but reasonable confid nce may be placed in their correctness,

The quality of Oregon and Washington Territory hops was not up to the standard last year. In that State the area devoted to the cultivation of this plant was 2,950 acres and the product 15,000 bales. In Washington, the production was 35,000 bales and the acreage 4,350. Total production on the coast 90,085 bales. The following disposition has been made of the

California shipped overland by rail 22,835; export shipments by water, 700; stock purchased by coast browers, 1,000, Oregon shipped ov rland by rail, 16,000; export shipments by water, 100, stock purchased by coast browers, 300. Washington Perritory shipped overland by rail, 32,850; export shipments by water, 50, stock purchased by coast browers, 100, total shipments, 77,535; stock left, on coast, 12,550.

There are said to be less hops in growers' hands just now than at the same time for many seasons past

The Merchane is the only wine journal

CULTIVATING GRAPE VINES.

In an article in the Rural Californium Dr. S. A. Merrill, of Pomona, suggests a new idea on the relation which the present methods of vine cultivation bear to disease. He says:

It appears from recent microscopic investigations, as reported in the public prints, that the "vine disease" which has made its appearance in Southern California is caused by a minute parasitic plant, or fungus,-probably a Cryptogam of the suborder, Protophyte, - some of which simulate animal life so far as to be classed among the Animalculæ, and propagated by exceedingly minute sporules.

It is not unlikely that the disease is similar in origin, if not in kind, to the Phylloxers, that has made such extensive ravages in the vineyards of France. That is, if we may be allowed to form a correct idea of the mulady the French vineyardists have been obliged to contend with, from the origin and derivation of the word itself.

The term Phylloxera evidently comes from two Greek words-Phyllon, a leaf, and Xcros, dry;-literally, the "leaf dry." From this it would appear that the French and California diseases are essentially alike.

The disease, whatever it may be, seems to have the property of extending itself from the domestic to the wild varieties of the vine

Indeed this is just what we ought to expect. That a disease, like this one, which has its origin in abnormal and deprayed subjective conditions-as 1 shall attempt to show-will spread contagiously by germ multiplication from unhealthy to healthy vinea.

But where are we to look for the real cause of this singular and formidable disease? Is it a purely objective malady, growing out of unfavorable climate, seasons, soils, etc? Or is it not chiefly subjective, originating in a defective and disordered vitality, and the result of protracted and artificial modes of propagation and culture? To this latter hypothesis we shall strongly incline until the contrary rale shall have been established by proper investigation and experiment,

And first in regard to our methods of propagation, which, in respect of its own more natural mode, are abnormal. The vine is a plant of higher order than the simple fissiparous and gemmiparous plants. True, it an exceedingly hardy, vigorous plant, tenacious of life, and capable of being propagated easily in all ways. But it belongs to the highest order of germiparous, or seed-producing, seed-originating plants and should once in a while he renewed in its vital organism, by going back to the original and normal processes by which nature propagates it, and perpetuates its vital energies.

A second and probably still greater deviation from the natural life and habits of the vine, is the almost universal system of cramp-culture that obtains in all countries and climates. By this artificial mode of culture the plant is constantly deprived of its foliage, which forms the lungs of the plant-that organ by which it perspires, and by whose aid the stomach (the roots) of the plant is enabled to carry on those processes by which it lives and grows,

This constant annual removal of almost the entire plant lung of the vine, while the unpruned and disproportionately developed root is left free to force its nadae and excessive plant-food and other stimuli, abundant to that section, and will some day with every returning year, into the newly command a good price.

forming embryonic lungs of the planttends finally without doubt to a diseased condition of the cutire plant, and in particular of its folinge. The roots become abnormally developed for the actual size of the plant, too much sap is forced into the leaves to form healthy lung-eells, and with the lapse of centuries of such artificial culture they become a fruitful soil for the spontaneous generation and growth of parasitie plants, and even animals.

What is the proper and radical cure of the disease? A return to natural methods. Prepagate the vine de novo, as has been done already with the potato-from the seed. Produce not only new plants, but new and better varieties, when once the work of improvement has been carried far enough to evolve new kinds.

Abandon the old and absurd methods of culture. Let the plant grow to something nearly its natural size and shape. Plant it, if need be, in rows the usual distance apart. and at the end of a given period of time dig out every other vine. At the expiration of another similar term of years remove the second alternate plant.

Managed in this way, the top will ad vance pari passu with the root; a more vigorous, healthy, constant, and better proportioned foliage will be developed, with healthy lung-cells, and hence the entire plant will be far less liable to the invasion of those parasites which are for the plant what tubercles are for the animal system.

It appears to be a universal law in all plant as well as animal life to develop microbes of various kinds in nearly all long continued and widely extended abnormal states. And these parasites either tend to aggravate the original disease, or to produce new ones.

And right here is offered one of the finest opportunities for some of our practical, intelligent and wide-awake horticulturists to confer a vast benefit upon society, and at the same time lay the foundation of a private fortune

It should be the aim of science to accomplish for the various fruits what the breeders of fine stock have already done for the various kinds of domestic animals -viz: cultivate out in the direction of certain points until some distinct and pure variety has been reached, that will produce its own kind from the seed.

In this way California fruit-growers would soon be able to produce new and superior varieties of the raisin, orange, fig, prune, olive, apple, pear, and many other fruits better adapted to soil, climate, etc., that would for a time at least give our beloved State the lead in all the chief markets of the world. With these few brief and imperfect hints, Mr. Editor, I will

BIG TREES-There are forest giants elsewhere than on the Pacific slope. Green and Wilson counties, in North Carolina, afford many examples, among which, according to a correspondent of the Raleigh News, is one pine tree which measures 22 feet in circumference and would make a stick of timber, solid heart, 6 feet wide and 35 feet long, or straight edge plank 6 feet wide and 35 feet long. Another pine measnred 18 feet in circumference and 100 feet to the first branch, Some white oaks measured would make plank 2 feet wide and 60 feet long. A pine measured 41/2 feet in diameter and 142 feet in length. These immense trees, the correspondent says, are

Savannah is believed to have the oldest wine in America, says the News of that city. A well-known Savannahian who is a connoisseur in wines, said a few days ago that he has a lot of Madeira of the vintage of 1833-over half a century old.

There are wines in Savannah, though, much otder than that. Some of the oldest famili s here have Madeira nearly a eentury old. One gentleman has several lots of the famous All Saints' Madeira, imported in 1791 and 1793, the year of the great fire in Savannah. Two pipes were imported that year, one for the great-grandfather of the late William Gibbons, and one for the father of Mat II wward, a prominent South Carolina planter. The night of the fire one pipe was left under the bluff by mistake, and the other was burned upon the bay. The pipe under the blaff was divided between Gibbons and 11 yward sthe onty fair way of settling their loss. Th gentleman who now has several lots of the wine bought it from Gibbon's and Heyward's descendants, eighty years after itdivision.

Then there is the famous Hunter wine imported about the same time. Some of i is still in the hands of frinds of the family, the late Mr. De Ronne, who inherited some of this wine, was often offered \$100 a bottle for it.

One gentleman has over twenty lots imported from the old Madeira house of Newton Gordon from 1802 to 1830. Savannah was a large wine importing port a century ago. The following is a fac-simile of an o'd bill of lading for a heavy shipment of wine in 1780, the completion of a single order for 500 pipes, or 1,900 hogs-

" Shipped by the grace of God, in good order, and well-conditioned, by Newton Gordon and company in and upon the good ship, called the Two Sisters, whereof is master, under God, for this present voyage, Wm. Smith. And now riding at anchor in the road of Funchal and by God's Grace bound for Savannah or Charleston, to say, 155 pipes fifty hogshead, and forty quarter casks equal to two hundred pipes of Madeira wine-and also twelve boxes lemona and some onions, all for account and risk of John Shoolbred. Esq., being marked and numbered as io the Margin, and are to be delivered in the like good order and well conditioned at the aforesaid Port of Savannah or Charleston (the danger of seas only excepted) unto Wm. Smith, and in his absence to Mr. J. Shoolbred and Moodie, or to assigns, he or they paying freight for the said goods with primage and average accustomed. In witness whereof the Master or parser of the said ship hath affirmed to five bills of lading, all of this tenor and date the one of which five bills being accomplished, the others to stand void. And so God send the good ship to her destined Port in safety. Amen. Dated in Madeira this 20 June, Wm. Smith,"

MEDICATED WINES.;

The thirty-first report of the Commissioners of Her Majesty's Iuland Revenue, says the London Lancet, contains a variety of interesting information, covering the net receipts from excise, stamps, land tax inhabited house duty and income tax. While the report is largely concerned with financial details clearly arranged in tabular 'soldier,' and at 7.30 P.M., a 'finisher.'"

form, the report by the principal in the laboratory in the appendix exhibits in small space the results of considerable labor extended over a wide range of sabjects. The increasing difficulty of keeping the sale of liquids containing alcohol in legitimate channels is illustrated by refer. ence to the so-called medicated wines which are said to be quite suitable for use as beverages. Two liquids of semi-medical names are mentioned as only possessing "their respective prefixes to distinguish them from champagnes of ordinary quality." It has long been well known that many temperanee drinks contain many varying proportions of alcohol. In this report it is stated that the sample of elderberry syrup examined contained 8.7 per cent. of proof spirit, that of "non alcobolic ginger cordial," 10.8 per cent.; that
of "unfermented sherry." 18 per cent.; and that "cowslip wine" (which looks oddly in this class), no less than 28.9 per cent. "Temperance" beverages have alvays been regard d with suspicion; but he medicated wines have been attracting he attention of the revenue officers by heir flavor, and by the size and frequency of the doser commended. Whether habita of temperance are likely to be fostered by hem is a question b yand the seops of the eport, which is confin d simply to the statement that an alcoholic liquor amployed as a heverage, of necessity beomes subject to revenue dues.

TEMPERANCE CORDIALS.

The chemist to the Board of Health of Massachusetts has published a report on investigations recently made by him into the tonics and bitters advertised and used in the United States. Forty-six out of 47 examined were found to contain alcohol in quantities varying from 6 to 47.5 per cent. the average being 21.5 per cent. One advertised as "not a rum drink" contains 13.2 per cent.; a "coca beef tonic," which is said to contain some sherry, actually contains 23,2 per cent,, while sherry contains only from 18 to 20 per cent. Another describ.d as a purely vegetable extract, a stimulus to the body without intoxicating" contains 41.6 per cent. of alcohol, while whisky and brandy contain only 50 per cent. This particular tonic is especially recommended to incbriates struggling to reform, because "its tonic and anstaining influence on the nervous system is a great help to their efforts." Another tonic, said to be distilled from seaweed, and quite harmless, contains 19.5 per cent. of alcohol and certain "German bitters," which ara advertised as purely vegetable and free from alcoholic stimulant, have 26.5 per cent. Certaio "sulphur bitters" contain no sulphur, and though advertised to contain no alcohol, actually contain 20 5 per cent-One maker's "concentrated sherry wine bitters" contain 47.5 per cent. of alcohol, or barely 2.5 per cent. less than brandy, while another "stomach bitters" contain 42.6 and a third 44.3 per cent. of alcohol. Of the whole 47 tonics and bitters examined only one was free from alcohol, and the average alcoholic strength was greater than that of sherry.

A newspaper published in Flander states that "the daily consumption of an ordinary drinker-not a druokard-there includes: At 5.30 A. M., a 'worm killer;' at 8 A. M., an 'eye opener;' at Il A. M., a 'whip;' at 2 P. M., a 'digester;' at 5 P. M., a

SUGAR REFINING.

In view of the recent collapse of the fraudulent electrical process for refining sugar, the following description of the gennine process from the Popular Science News will have timely interest:

"Sugar is a peculiar product of many different species of plants but the greater part of that consumed is obtained from the sugar-cape and best root. It has been known in the East Indies and China from a very remote period, but has only been generally used in Europe and America since the beginning of the eighteenth century. Previous to that time it was an expensive luxury instead of the cheap necessity of life which it has now become. Bert sugar is extensively used in Europe, the cultivation of the root being stimulated by the goverments, but in this country the supply is principally obtained from the sugar-canplantations of the Southern States and the West Indies. The sugar cane belongs to the family of grasses, and contains about eighteen per cent, of pure sugar, although not more than one-half of this can be actually realized. The canes are crushed between rollers, and the expressed juice boiled down to the proper point and allowed to cool and crystallize. The most impure dark colored mass of crystals obtained by this process, is known as raw sugar and is shipped to the refineries, while the liquid which drains off is known as molasses, and consists of a mixture of cane-sugar, inverted sugar, caramel, etc., with a liberal admixture of "extraneous matter," that is, dut. The process of refining the raw sugar and converting it into the white, brilliant, and chemically pure crystals of granulated or loaf sugar, is an interesting one. The raw sugar is dissolved in water, strained to remove the coarser impurities and primped into large tanks, where a quantity of albumen, usually in the form of ox blood, is added, and the mixture heated until the albumen congulates or becomes solid. In so doing it separates out the impurities which, entangled in the mass of albumen. rise to the top of the liquid as a thick scum which is pressed dry and solid as a fertil. izer. This process is exactly analogous to the "clearing" of coffee with the white of an egg, the only difference being in the source from which the allumen is derived. The solution of sugar is now perfectly clear and pure, but is still of a dark color, which must be removed. This is done by filtering it through long from vessels filled with bon-black or charred bones coarsely ground. This bleaching property of honeblack is not very well understood, but is a most valuable quality in many other arts besides that of sugar refining. The impurities are doubtless attracted and held by the pores of the bone-black, as it loses the property after awhile and must be burned over again to r store its power. We now have a clear, colorless solution, consisting principally of saccharose or crystallizable sugar, with varying amounts of inverted or uncrystallizable sugar. It is only necessary to concentrate it by boiling and allow the sugar to crystallize out. however, this is done in an open pan under the ordinary pressure of the air, boiling will only take place at a temperature sufficiently high to "burn" the sugar and form caramet and other undesirable substances. The evaporation therefore takes place in a vacuum pan, an air-tight hollow vessel heated by a stram coil and from which the air and water-vapor are exhausted by a powerful pump. According to the gallery. The strong headed ones stood at whisper of it till Thurs lay. Three leading Transisco Merchania.

it diminishes, the clear syrup boils at a enough upon the fields or the twadding, cab, and they do not so how it could sufficiently low temperature-from 114 degs, to 150 degs,-to prevent the alteration or decomposition of the sugar. This rience, and only a thoroughly skillful workman can obtain a complete and unit formly crystallized product. After the concentration has reached the proper joint the syrup is drawn off and allowed to crystallize, forming granulated sugar. The mother-liquer or syrup is drained from the crystals and boiled over again and a fresh crop of crystals obtained, and this process is repeated several times. These products are of inferior quality and are sold under various names as "coffee crushed," and "brown" sugars. There is a popular opinion that these sugars are sweeter than the more refined article, but this is a mistake, and they are really less a conomical to purchase, as they contain more or less mois ture and glucose for which a compara tively high price is paid. The crystals of granulated sugar are dried without heat by a most ingenious machine known as the contrifugal dro r. It is a cylindrical vessel with finely perferated sides, which is filled with the moist sugar and rotated with great velocity. The water is thrown off through the sides by the centurugal force, leaving the sugar almost dry, a simple exposure to warm air only being needed to complete the process, and it is then ready to be sifted into barrels and sold in the market. Loaf sugar is refined in the same way, but the concentrated syrup is allowed to crystallize in coincal molds, so that it hardens into a solid mass which is afterwards cut up into lumps. Rock-candy is sugar which has been allowed to crystallize slowly so as to form large crystals. Granulated sngar is one of the purest arti eles of food produced. It is rarely or never adulterated, the characteristic form of its crystals rendering any foreign admixture vi lent upon simple inspection."

SOME OLD TIME DRINKERS.

In the late Lord Cockburn's "Circuit Journeys" it is recorded that "at Edinburg the old Judges had a practice at which even their barbaric age used to shake its head. They always had wine and biscuits on the beach when the business was to be plainly protracted beyond the usual dinner hour. The modern Judges-those I mean who were made after 1500- never gave in to this; but with those of the preceding generation, some of whom lasted several years after 1500, it was quite familiar. Black bottles of strong port were set beside them on the bench, with glasses, carafes of water, tumblers, and biscuits; and this without the slightest shame or attempt at concealment. The refreshment was generally allowed to stand untouched and as if despised for a short while, during which their Lordships seemed to be intent only on their notes. But in a little while some water was poured into the tumbler and nature. Then the few drops of wine were ventured on, but only with the water. Till

of a liquid is lowered as the pressure upon victory over Braxfield. But it told plainly to reviewed say they never heard of a syndisuch as Eskgrove and Craip. Not that the work. The probability is that So atch sagar ermine was absolutely intoxicated. But it people have not been semiled on the sale was certainly muzzy. This, however, was per. It has never to en monthly in the process of evaporation requires great expects ordinary with these sages, that it really. Civile sagar market. A Bristol corresponmade little apparent odds up in them, dent says. Although Bristolis on of the had reached the lowest abb."

Lord Cockburn himself never emulated sugar in lastry effectually. these giants, not even in his younger days when he bids thus; "Take notice, there never was the slight at drunkenness. El vation there was; but it stopped far, far below the intoxication mark. Excess in gives the following simple and definite wine was never the habit of any sit of friends into which I have been thrown? Yet at his deathurg, circuit dinner, in 1851. "nineteen persons drank thirty-five bottles of vort "

THE ORIGIN OF COLORS.

The cochineal insects says Infordion furnish a great many of the very fine colors. Among them are the gorgeous carmine, the crimson, scarlet carmine, and purple lakes. The cuttlefish gives the sepia. It is the inky fluid which the fish discharges in order to render the water opaque when attacked. Indian yellow comes from the camel. Ivory chips produce the ivory black and bone black. The exquisit Prussian blue is made by fusing horses' hoofs and other refuse animal matter with impure potassium carbonate. This color was discovered accidentally. Various lakes are derived from roots, barks and gums. Blue black comes from the charcoal of the vine stalk. Lamp black is soot from certain resinous substances. Turkey red is made from the madder plant which grows in Hindostan. The vellow sap of a tree of Siam produces gamboge; the matives catch the sap in cocoanut shells. Raw sienns is the natural carth from the neighborhood of Sienna, Italy, Raw umber is also an arth found near Umbria and burnt. Indm ink is made from burnt camphor, The Chinese are the only manufacturers of this ink, and they will not reveal the secret of its manufacture. Mastic is made from the gum of the mustic tree, which is in the Grecian Archipelago. Bistre is the soot of wood ashes. Very little real ultramarine is found in the market. It is obtained from the precious lapis-lazuli, and commands a fabulous price. Chinese whitis zinc, scarlet is iodide of mireury, and native vermillion is from the quicksilver ore called cinnabar.

A SUGAR SYNDICATE

of the syndicate idea is the International vines. The balance rich river bottom, and Sugar Syndicate, which proposes to pro-rolling land capable of the highest cultivamote or oppose legislative and other meas- tion. Several never failing springs and ures affecting the sugar trade, and to assist sipped quietly as if merely to sustain in the readjustment or modification of State subsidits, drawbacks, and bounties, property. Good house, large born, and to prevent the use of deleterious substitutes, out buildings. Seenery, chinate and roads at last patience could refrain no longer, and for sugar, and to do a variety of other unexcelled. Good fishing and hunting in a full bumper of the pure black element things for the benefit of the sugar tradwas tossed over, after which the thing A Glascow correspondent says. The news went on regularly, and there was a com- of the formation of an international sugar fortable munching and quarting, to the syndicate has surprised the commercial homes in Northern Cairfornia, great envy of the parched throats in the community of Glascow, for there was not a

well-known principle that the boding point tolerably well. Barchus had never an easy men in the sugar trade who have been in-Their neses got a little rold r and their most important sigar refining a nears in speech somewhat thicker, and they become the king tem, their finers here were in no drowser. But these changes were not way communicated with in reference to the perceptible at a distance, and they all act international syndrous. So far as home quired the habit of sitting and looking action is concern I, the Sugar R finers' judical enough, even when their bottles. Association and the Green's Association, the Bristol i finers' state represent the

FORLILLES FROST

For the bin fit of farmers to moral timely in thed by which in clear, cool weather, near the period of early or late trests, a person may ditrinto with consil rable accuracy if frosts will occur the following night. - The approach of local frost can be foretold with very consiliable accuracy from the readings of property exposed dry and wet thermom ters. A safe and simple rule to feal w when the temperature is at 5) degrees, or below, is to mortiply the difference between the radings of the thermometers by 2.5, and whom the sum thus obtained is subtracted from the ruching of the dry thermomet rait Layes the approximate degrees to which the temp rature of the air will fall the coming night, unless change of wholt is must riquart r or iner is of cloudiness interferes. The value and majortanes of observations of this kind have not been sufficiently impressed upon farmers cultivating crops of a kind sase petable to frost and capable of protection." It may be stated in this connection that the "wet thermemeter" in atomed above, is an instrument the bull of which is kept moist by its contact with a bit of lamp-wick fed from a small reservoir of water.

Trock's Mile At East India draught called "tiger's milk" is not gonerally known. Add the heaten yolk of three eggs to two tablespoons of white sugar, three cloves, the rind of half a lemon and half a pint of imperial crown brandy. Pour over it a quart of new warm milk, stirring rapidly and immediately. This is recommend d for those who live in malarial districts, says Medica, Casses, and for delicate persons before breathing the crisp air of autumn or winter. A wineglass full will be suffice at in this climate.

FARM FOR SALE.

Two hundred acres in Senema County, ten minutes drive from rater ad station, It is stated that the latest development, Forty acros planted in the finest variety of plenty of oak and redwood timb i on the th neighborhood all the year round. One of the most elegant and profitable suburban

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AGENTS.

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FRIDAY..... FEBRUARY 1, 1889

During the 120 years which have elapsed since the first olive trees were planted in California, the industry has been gradually gaining ground. The cuttings obtained from Mexico, and planted at the old Mission of Santa Barbara by the padres are gnarled with age, their place being taken by extensive orchards of the choice varieties from Southern Europe. The past year has developed a more marked interest in olive culture. The adaptability of the tree to the more temperate climate of the northern portion of the State, and to lands practically useless for agriculture, has attracted public attention and led to the planting of a large area in orchards. Much time and attention has been given to the subject by competent writers throughout the State, resulting in a fund of information, being compiled from all sources both practical and theoretical, for the use of the planter. The MERCHANT devoted considerable space in the last issue to a comprehensive article on the subject, from the pen of Secretary B. M. Le Long of the State Horticultural Society. Its perusal will be interesting to those engaged in the business. In the choice of varieties, much depends upon individual taste. Old Californians still maintain the superiority of the old Mission, and it is noteworthy that the pioneer orchard of the State is made up of this single variety. The returns from orchards estimated at \$1,000 per acre, seem to just tify the owners' opinion that with such a showing there is little to be gained in experimenting with other varieties which have not been proven. The prospects for the coming year, based upon the extensive plantation now going on in Santa Clara and other counties of the State, are, that the production of olive oil will soon rank as one of our most prominent indu -

DURING THE eleven months ending November 30, 1888, the imports of merchandise into the United States, amounted to \$664,744,506, against \$656,707,250 during tha same period in 1887. The exports for the same period in 1888 amounted to \$594,-867,465 against \$631,357,178 in 1887.

THE WINE Exchange at Platt's Hall, nuder the auspices of the Viticultural Commission is gradually developing a practical utility to dealers and growers. The roomy premises afford opportunities for display, light and good air farnishing attractions which are not to be despised from a business view. The cafe is under the manage, ment of Pierre Klein, a local restauranteur of reputation, and the wines furnished are open for selection from the leading viueyards of the State. Among the exhibitors we note the following: "Tokalon" H. W. Crabb, Oakville, Napa County; "Burgandy Vineyard," J. B. J. Portal, San Jose; Napa Valley Wine Company of Napa City and Yountville; Charles Krug of St. Helena, Napa County; Purity Wine Company of 303 Battery street, San Francisco; Mout Rouge, A. G. Chauchie, Livermore, Alameda County; Ben Lomond of Santa Cal.; Cruz. Schramsberger, Jacob Schram, St. Helena, Napa County; Cresta Blanca Souvenir; Charles A. Wetmore, Livermore, Alameda County; Arpad Haraszthy & Co., Orleans Vineyard, Madeira, Yolo County; Los Gatos and Saratoga Wine Company, Los Gatos, Santa Clara County; Oliveuia Vineyard, Livermore, Alameda County; Sau Gabriel Wine Company, Ramona. Los Angeles County; Kohler & Frohling, J. Gundlach, L. J. Rose & Co., I. De Turk of Santa Rosa; Hedgeside Vineyard, Napa County; El Pinal Vineyards of Stockton, J. L. Beard, Alameda County; Summit Park Vineyard, Sonoma County; V. Courtois Larkmead, Napa County; Paul O. Burns Wine Compauy, San Jose; R. M. Wheeler, St. Helena, Napa County; New Almaden Vineyard, San Jose; C. Schilling & Co., E. J. Baldwin, Santa Anita, Los Angeles County; Naglee Vineyard, San Jose.

It is the prevailing impression that the London Exhibition will be of more service in advertising the varied products of California than the World's Fair to be known as the Paris Exposition. Here the exhibit sent from this State will simply be dumped in, to form the aggregate of some particular class, the only distinguishing mark being a small label. In London, however, the arrangements will be more satisfactory. Each county will have a separate space allotted for its individual products, thus avoiding any disagreeable mistakes in the way of confounding a Californian grape with an Abyssinian plum. This will afford a rare opportunity for advertising the varied resources of the State and also extending our trade. The exhibit should be large and carefully selected. To do this properly will require money and organized action on the part of the different industries. It will be of general benefit to the State, and therefore the State should aid the enterprise. The reputation of California will be staked on her display, and neither time nor money should be spared in providing an appropriate representation.

The following record of New York receipts of California wines and braudies for 1588 is given in Bonfort's Circular: Edinger Bros. & Jacobi, 587,720 gallons of wine and 176,612 gallons of brandy; B. Dreyfus & Co., wine, 574,100 gallons, brandy, 21,900 gallons. Kohler & Frohling, wine, 542,930 gallons; brandy, 21,047 gallons. San Gabriel Wine Company. wine, 312,715 gallons; brandy, 28,210 gallous. Gretsch & Mayn, 70,071 gallons of wine and 10,790 gallons of brandy.

THE AGRICULTURAL College of Colorado located at Fort Collins, has been experimenting with several varieties of snear beets. Four varieties of sugar beets were received from the Department of Agriculand the surroundings are cheerful, good ture at Washington last spring, and were sown April 15, on a fourth of an aere of ground. The plot was irrigated four times, cultivated six times and hoed twice. The varieties are as follows:--Lane's imperial, roots smooth, skin white, reddish tint, growing underground; estimated yield per aere, 30,45 tons. Excelsior sugar, roots smooth, skin dull white, growing underground; estimated yield per acre, 29.4 tons, Vilmorin sugar, roots smooth, skin white with a purple tinge, somewhat wrinkled, growing underground; estimated yield per acre, 25.9 tons, Improved imperial sugar, roots rough, skiu dull yellow, growing one-half above the surface of the soil: estimated yield per acre, 24.15 tous. The soil in which these varieties were grown is a clay loain which had been in clover soc for three years previous, and was plower inder in the fall of 1887. Analyses of the above mentioned varieties were made b Prosessor David O'Brine for the purpos of determinating the percentage of sugar in each, with the following result:-

														1	P	e	г	cent	
Excelsior		٠.						٠										9.54	۲
Lane's imperial									 		٠.	 					. 1	12.80	
Vilmorin										ï		 					. 1	11/39	
Improved imperia	I.			i	i							 		 				8.83	3

According to these analyses a ton of excelsior sugar beets would contain 191.6 pounds of sugar; a ton of imperial, 256 pounds of sugar; a ton of vilmorin, 317.8. The yield of sugar beets in France under average conditions is sixteen tous to the acre, containing sugar to the amount of 12 or 13 per cent.

MUCH INTEREST is being eviaced in scientific circles as to a wonderful plant which, it is claimed, is an infallible judicator of change of weather. The British consul-general in Vienna has been instructed by the foreign office to request Professor Novak, who is the discoverer of this famous plant, to furnish him with information about it. The committee of the Jubilee Exhibition which has just closed has promised Professor Novak a certificate to the effect that the weather forecasts made by his plants were correct in ninety-six cases out of one hundred. The professor has made arrangements with Mr. C. W. Radeke, of Clapham common, London, to exhibit the plant in England, and to answer all inquiries about it. Further, Herr Novak wishes it known that his plants are now giving indications of shocks of earthquake, which may be expected to occur during the coming week within one hundred German miles south of Vicuna.

RECENTLY THE Hon. J. De Barth Shorb, sent a letter to the Board of Supervisors, of Los Angeles, describing the work he was doing in trying to find out what is causing the disease which affects not only the grape vines in Los Angeles county, but those of Napa and Sonoma counties. He also asked that the Supervisors give him some assistacce in the experiments he was making, and appeared before the Supervisors to explain verbally the amount of work that had been done and what he expected would he ascertained by his experiments. Supervisors decided to appropriate \$300 for assisting in the experiments and \$100 for his Secretary.

ONE HALF of the wines which will be used at the inaugural ball will be of native growth. This concession to the home industry is due in a large measure to the persistent advocacy of Miss Kate Field, who is now lecturing in the East on "The Gospel of the Grape." That her apostolic mission is bearing good fruit, is evident from the hearty approval which on every side has greeted her patriotic suggestion that only American wines should be used on this august occasion. Half a loaf is better than no bread, and Californian wine growers will fully appreciate the untiling energy and friendly interest which Miss Field has displayed in their behalf.

WE ARE in receipt of a pamphlet issued by H. T. Dewey & Son, American wine, champagne and brandy merchants of 133 Fulton street, New York. This firm is a pioneer in the native wine trad , having for the past thirty years confined its dealings to the product of American grapes, It is seldom that during such a lengthued experience a metropolitan house can say like Dewey & Son, that they have "uever put a foreign lab I on a bottle, r sold a gallon of any but American wines and brandy."

THE FOLLOWING are the lengths of the six lines of railroad connecting the Atlantic and the Pacific: Union and Central Paifie, New York to San Francisco, 3,315 miles; Southern Pacific, New Orleans to San Fraueisco, 2,495 miles; Atchison, Topeka and Santa Fe, New York to Guyamas, 1,024 miles; Atchison, Topeka and Santa Fe, New York to San Diego, 3,217 miles; Northern Pacific, New York to Tacoma, 3,302 miles; Union Pacific, Oregon line, New York to Portland, 3,285 milea; Canadian Pacific, New York to Vancouver, 3,166 miles, From Vancouver City to Montreal is 2,906 miles.

IN A LETTER to the Los Angeles Herald, on the vine disease, Mr. Shorb takes a very scusible view, in refusing to make a sectional issue of a matter of common interest to all viticulturists in the State, A danger threatening one quarter must be anticipated by all, and combined efforts made to exterminate it early in the fight. Puling over difficulties is not the religion of Californians, and those who are weak enough to howl over calamities, should take a back seat early in the game-new counties and new industries have no room for dyspeptics or saivellers.

THE "ICEBERG" which sailed for New York on the 20th inst., carried the most valuable shipment of wine and brandy ever made by one firm from this city. It was consigned by the Sonoma Wine & Brandy Company of Stockton to their house in New York, and consisted of 534 packagea of brandy and 1662 packages of wine, valued at \$66,942.

There are eight hundred and fifty thousand stockholders in the Panama Cana Company, who have put three hundred million dollars of hard cash into the enterprise and all that they have now to show for the money is \$100,000,000 worth of machinery, \$150,000,000 worth of uncolteetable bills against awindling officials, and \$50,000,000 worth of uncompleted canal. This is certainly not a good showing, and the story that an American syndi-cate has taken hold of the matter, and will complete the canal, may hel taken with a grain of salt.

THE VINE PEST.

A Pointed Letter on the Subject From Mr. De Shorb.

Los Angeles Herald.

A short time ago the Messes, T. C. White and George E. Freeman, of Fresno, wrote the Los Angeles Hera'd a very constic notarraiguing Mr. J. D. barth Shorb, of this county, for having stated that the vine pest threatened the vincultural interests of the State at large. They were quite caustic, and one would suppose, from their confident tone, that anything like a viticultural drawback had never been heard of to Fresho county. The matter is of such vital importance to the whole of California that we treat it iditorially. B now we give the letter of the M sers Freeman and White

EDITORS HERALL - Our press this me ruing states that J. De Barth Sherle stated yesterday that "the same vine diseas, that is now troubling your region is running the vineyards of the entire State, " Mr. Shorb could not in honor make such a sweeping statement without the full st knowledge of the fact, Now, the vin yar lists of Freshe county demand from him the proof of this at least as it relates to this region. Such a statement without proof is an outragagainst large portions of this State. signers of this is to are two large vineyardists of Fresno county, and are doubtless as well acquainted with the state of the vine, yards here as any other persons.

We have never heard of such a disease in this region, and with a careful and most extensive observation have never detected the first evidence of it, and feel certain that it has never been discorned north of Los Angeles county. Through your columus we ask Mr. Shorb to inform us on what authority he bases his statement. It it is true we wish to know it; if false he must at once see the gross injustice he is doing this and other parts of the State, and we demand that he should at one retract T. C. White such declaration.

Gro E. Freeman.

Fresno, January 9, 1889.

Our Los Angeles viticulturist meets the issue raised with visor closed and lance couchant, and it must be borne in mind that he speaks from the standpoint of authority. He was officially directed by the Viticultural Commission to make inquiry into this threatening visitation. We give his letter below

EDITORS HERALD .- Referring to the foregoing open letter, that I may be able to auswer it satisfactorily and fully, I must ask that you republish it. I am sure I do not know what paper those apparently trate gentlemen refer to, as "our press," and not having the statement before me to which they refer, or knowing who has quoted inc. possibly I may fail in giving Messis. White and Freeman entire satisfaction, and yet I will try.

My authority for saying that I believe "the disease" was unfortunably spread all over the State, is the inicroscopic idenlification of the same discuss on vines and leaves sent to us by Mr. Isme De Turk, Commissioner for Sonoma District for examination and id-Ltification. They were reported on by Prof. Ethellert Dowlen, scientific expert in charge of this investigation, to the Commissioner, which report is published in full in the San Francisco Meta-CHAST of January 1th, by the authority of the State Viticultural Commission. I preSan Francisco Myrchant north- San Fran- and published in the Mkrahant of Janueiseo Chronich, which published this fact ary 4th, will show conclusively how anxsome time about January 1st. During the jour the Commission is to discover all the month of August last I visited 8 noma; county and observed there very suspicious. signs, among the vines; and ealing afters [would carnestly advise all parties into ested tion to the same, I was assured that what I to read his letter and follow his advicsaw was the result of "the very hot blast. and nothing more. As I have invested in the "must business" along with my assescritis about \$11,000, and the plant is be cated at G ys rville, S nome county, depending upon the vineyards there to supply the grapes for our business, I am surely interested directly in the vine interest of that county, and yow with do joe neem all that may in any wise off et the same Profs. Scribner and Viola are reported as saying the sam disas is in Napa, nor does Mr. Kruz, Comtaissioner for the Napa district, dony that a discass at least sumi far was bout I there. As a beaves not can shave been examined from Napa, this report lacks see atitle determination,

Mr. G. C. Hagar, of Ocatige, known by all in this county as a 20th monoil great intelligence and antire reliability, inform A methat Mr. R Jert M. Pherson, of Orang. who has suffered severely from "the disas ," and who has been studying it closely for the past three years in his own vinevards, had recently returned from a visit to Fresno and reported that "the disease" was also there in the vine pards. I think I mennoned this fact to Mr. George West, Commissioner of the Stockton District, at the somi-annual mosting of the Board. He is largely interested at Minturn in Fresho county, and I am sure by took no off nor it the statement.

If Messrs. White and Freeman Chever heard of such a disease' "north of Los Angeles county, "they simply convert the inselves of a want of knowledge which they might easily have obtained in a cling the MERCHANT, Extra or a tradition of I b. here this answers the " pen letter" and relieves me of the charge these gentlemen would ake to fast u on me, or making unwarranted statem ats. I blir v. I am sufficiently well known in this State and Fresho county not to permit any such uncalled for letters to ruttle my temper, but is not othe wounded bird tod by its flattermes?" The Viticultural Commission at their semi-armual meeting charge I me with the responsibility of this investigation, This trust I endeavor to discharge to the best of my ability, and containly I will not be turned aside by any hostile letters from ; any quarter, or fears of invoking sectional [1836]. Its area is 53,045 miles. projudice and bad temper. In conclusion, I may be permitted to ask of these gentlemet, if they have visited our infected dis- mitted into the Union March 1, 1807. trict and there inspected and examined "the diseased" vines and made themselves thereby familiar with its symptoms or indications, so as to en do them to the bridy it elsewhere could if n t, how "could the most extensive observations" result in subcon Justins even to themselves to 11.15 15 no time, gentlemen, for the exhibition of any sectional feeling, the common chemy and danger should units us all, first, into close examinations and my stigations as to the presence of the disease money beauty and so ondly, in an earnest off it to discover its origin or nature, and thirdly, when known, in a determined effort to stamp it out, and it vise me also for its pre-

sume these gentlemen have not seen the to all vineyardists throughout the State, stroyed 100,000 barrels of the fruit

facts obtainable, and to aid all grape growers in blentifying "the disease,

It the aid of the unicrose quasany kellly any one in making the investigation for himself, bet not sectional propulate induchim to look through the wrong end of the glass in the direction of his neighbors.

11 specifully, J. DE FABIR SHOLD

S in 6 th 5 (January 12, 1883)

WHOLESALE MARKEL.

Quitt negation of first The total CALIDORNIA RATSINS. Halols, Quarters and Eight st 25, 50 and 75

they than so he sox pro-Lord n Layers, charge per box ... \$2.000 r Laters, por to X and a control of the later 1.100 far y, in sacks, per R. e sanas, u bleach de est.

Grapes, Musant, 28, 2+5, 1, 40+4, 50 Galls, 4.50 Galls, 4.50 Galls, 4.50

Sun Irrad Grapes, Stem'ess, Slev. I neteromed, says

SugarjQuotations.

January Joth; Circle A. Pat Cub., 6 . Circle A Crushed, 61 c; Pine Crushed, 61 c Extra Powdered, 6 4c; Dry Granulatell, ve, Confectioners' Circle Λ, 604 c. Extra € , Gold n. C. 47,c; Star Drips, Syrup. in blds, 17 gr. hf do, 20c, 5-gill kegs 25c, 1 g ill tins, 35c per g dlen.

Price ast of the American Sagar Refinery dated January 30th: Extra Fine Cube, in bbls, boyer Circle A. Crished, boyer Fine Crushed, 6 4c. Powdered, 6 4c. I stra Fun-Powder d, 7c. Dry Granulated, XX 6 40 Dry Granulated, 60, c. Confectioners' Cirel A, G . Catta C, 5 . Golden C, 11, . American Gold n Syrup, in bbls, 20e per

OBLOOK contains 94 560 square unb s was withed in 1811 at Astoria, and was admitted into the Union Peb. 12, 1850.

Arkansas was a tiled in 1985 at Arkansas Post, admitted into the Union Joine 15,

Nebraska contains 76,185 square miles was settled in 1854 at Omaha, and was ad-

Louisiana contains 45/320 square tailes was settled in 1600 at Herville, and was admitted into the Union April 30, 1812.

Maine contains 2 0805, square, times, was softh I in D 35 at Bristol, and was charitted into the Union March 15, 1829.

to organ contains 55,000 squire has was whiled in 1723 at Savannah, and was addingly duple the Union Jan. 2, 1755.

Huner-contains 55,000 (square mil) s. wa settic kin 1729, at Kaskaskia, in L. was a lematted into the Union Documber 3, 4818

Maryland contains 0.8 0 square nones was settled in 1721 at St. Mary's and was admitted into the Union April 28, 1788.

Mr. John H. Wheeler's Chief Liventive. The Myreev grape crop is short in the Vitroitural Officer open letter address degrar just closed, a single storm having de-THE MALL A grape crop is short in the Is the projet carried out

WONDERS OF THE SIERRAS.

The priceless and numberless valuable articles discovered from time to time in the great Serra range of mountains of Calierner, where, as we well know, mighty made as have been taken cit, and there yet remain millions of under overed gold, for whi h mankind is day by day striving ever to grosp, also the forests of gigantic trees that traverse its entire length and breadth, its granit, and other valuable building stone, and many articles of commercial value that time and man will bring to light, are in their way would is the grandear of which we can hever fully realize. But the greatest and most wonderful of all the productions found in these mighty hills is the herb from which the Great Sierra Kidney & Layer Cure is manufactured; discovered by a tray-ber growing in its sunplicity as a resel on to linsh unseen, but thanks to int ligance and incheal science it was r sould from its modest bed and has become a mighty power in the land, Science his produced from that same herb an active that is time rolls, on will never die, for as mandanel follows, the thrilling off-et of its wondrous our s he will forever praise his G I for growing such an high and prins the fortunat may be for his discovery. The Serra Ch might Company have had immense success with their Great Spria Kidney and Liver Cure. They have brought to light a purely vogetable article that is warranted a sure cure for Bright's diseas, diab tes, exturn of the bladder, California Sugar R finery price list dated smorting pains in the small of the back, and all disorders of killneys and liver, Warranted purely veg table. For sale by all druggists. Sierra Chemical Co., office, is Post street. San Francisco Cal.

> lur guerros ef taxition on grajehearly has for years been a prolific source It seems not to be in a pair way of a tilement through the efforts of two western S nators, both of whom have the best interests of their constituents at heart, while one of them has an intimilto acquaintance with the requirements of the grape-grower. In view of this it is nine cossary to dilate on the varied opinions which have from time to time been expressed on the subject. All that the wine men desire is to have their taxation on grap sbrandy reduced to a rate which will for the difference between the cost of their production and that from corn and thir grain. A five cent tax will be fair to all, while at the same time it will keep distribution and rigovorument supervision.

WHAT NEXTS

Too L s Angles Her d says. It is proposed to establish a D er Park on a large scale in the halls of the San Vie ntey San a Monie's ranch of the Mosses, Jones and Baker. In the Surris back of Santa

Money these gentlemen own some twenty the count act s, wanch it is sought to enlose for this purpose. As this hill land lies now it is not productive efficyence. Should it because I however, the sale of perm to to short game with I doubtless result in some means to the san rs. As it is, about says I may amondly shid in thise hills. They doesn't in all kinds of game, which suitborrowly increased by judicious regutitions and many people would pay for

the privilege of shorting it. We hope to

KRUG CHABLES.
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DR. JORDAN'S

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(10 an Ulearn how to avoid disease and (to an Hearn how to avoid discusse and thow wonderfully you are made Private office 211 Genry street. Con sultation by letter on lost manhood and all discusses of men. Bright's Discuse and Dydett's cured. Send forbook



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C. S. HALEY Secretary.

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WHITE ADRIATIC FIG TREES AND CUTTINGS,

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CUTINGS \$5 per Thousand.
GRAPE ROOTS AT REASONABLE RAYES.

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The following is taken from a letter written to Mr. Denicke, by John Rock the wellknown nurseryman and horticulturist of San Jose:

M. Denicke, Fresno: DEAR SIR-The figs sent to me to San Jose are very fine, and nothing Las yet been produced in California to come any way near them, * " Enclosed are orders for twelve additional cases.

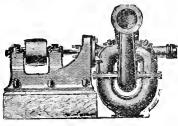
Very truly, JOHN ROCE, San Jose, January 7, 1889.

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OUR NATIVE WINE SHIPMENTS BYSEA.

TO NEW YORK PER SHIP TORBERO, Jan. 20, 1889.

MARKS.	SHIPPERS.	PACKAGES AND CONTENTS.	- ILLON	VALUE
MARKEY,	BIIII PRS.	TACKAGES CALCUSTRALS.	1112018	YOUR
Vito	Is Solid by A. Commis-	31 pure heens Wine	5.29%	82,1
t	Carpo & Co.	[50 Journal's Wome] ;	2,3531	1.1
M	***	10 tarrels Wine, access	500	20
F H W	S Lachman CCs	2 barrels Wine	100	
5 & Co	Carps & Lo.	Sacharrels Wince, Control of the Con	1,615	f si
1) & Co	B Directus & Co.	3541 barrels Wine	16,975	6.75
1	Lechman & Jacobi	30 Sarrels With	1, 195	125
B & J	1.5	750 forreis Name	1 1	
14	1.0	175 from freedow Work	15,505	112, 11
A.F	Kilder & Er deling	L50 barrels Water	7,500	33,414
11	100	50 harrely Wine	2,5200	1,01
J. 11	barringer Brown, and	50 Jarrele Wince,	2,149	119
Bros.	J. Schram .	I barr I Ware	501	1
. ↓ Co	t so fulling & C+	Do pune as no Wine	2,1-1	\$15
W & Bito	Samma W. & P. L.	Himb to cods Wine 1	1	
	**	22 half barrely Wine, 1	82,085	52.80
A S	**	154 packages Brandy	1 23 7	4.67
41	11	Latt pro Kager Brindy		10.50
£1	1.	1300 peck gas Brandy	59, 3953	18,95
Total amount of Wine			.173962	8130,53
Total amount of Brand				

PER P M. S S CO'S STE MER ACAPULCO, JAN. 23, 1889.

TO NEW YORK.

K & Y D	Konar & Van Dagen	Districts William	i kun	83 (
L G	IC Schille to A Commercial		110	37
			 4.1	25
	Carps & Co		1 60	1161
t in drimond		Lasos With		20
h & F	Wohler & Frolding.	100 barrels Wine.		1,500
J.M.C	prenormand by security	Mibarrels Wanca.	2,175	743
ВВ		27 barrels Wine		101
CDK	Lachman & Jacobi	10 pancheous War		1,426
G F		12 barrely Ware	611	203
G,,		G barrs b Wine	1	
		I half barrel Wine		232
G V S	Wultiers, Binion L&C	(I baird Win	51	- 61
Total amount of Wine,	Lesses and		17,617	\$7,781

TO CENTRAL AMERICA.

H J, Connto.	J. Giffiellach, K. Co.,	2 half bactels Wine	835	s-10
	* 1	I keg Wine	15	10
G.S. Puntas Arenas	E Kemen & Co	I I built barrels Wane	111	94
F.F. Funtas Armas	P 4	5 for ds Wince,	250	191
J R R T, Pontas Archas	* 1	10 half taro is Water	277	150
J.H. La Union	al Transfer Co	A barr Is Witte	150	100
A C D. Acapitla	B Dreyfis & Commerce	. II ball barres Winc	30.37	
1.4	***	27 Kegs With il	1700	420
V. Corinto		Lichegs With	197	1060
F & H. Puntas Vrenas		10 nelf-barrels Wine	277	250
F, Puntas Arenas	* *	Leall-barres Water	169	105
I C S & Co. Puntas Aremas	* *	15 ki ge William a comment	150	145
& S, Champerico	Schwartz Bars	20 cras Water	í	561
B & Co, La hibertad	Bloom, barnch & Co.	2 barrels Wine	1111	Li o
M, Acajutta	LF Wright & Co	2 kegs Wine	20	17
		2 halt learnels Wine	5.1	29
R, Acajutla !	* *	15 lb gs Witte 11 11 11 11 11	25	2.1
A, Corinto	**	Divisos Witte		1480
R, Corinto	8.9	Theg Wine	16	10
R. A ajutla	4.4	G kegs Wine	42.0	339
	1.5	21 cases With		7.5
& H, Amypala		Seas a Water Committee		60
LN & Co, Corrido	Stockton Willing Co.	1d kegs Witter	tion	65
A L. Amapula	Misks	Thegs William	55	51
D & Co. La Libert of	rrucha & Unio te	I cask With	59	2.1
Total amount of Wine,	Diasisand		2,407	\$2,316

TO MEXICO.

	6 or layer Wille		24
A 1 & O E Keman & co	25 cises Wine	 	7
	-		

MISCELLANEOUS SHIPMENTS

DESTINATION	125581	Rfu	- 1	6 VLLONS,	VALUE.
China	Neptuno Jennie Walker	Steamer Steamer Steamer Schooner Schooner Stamer Steamer		6 535 1,712 190 193 2,500	1,520 190 127
San Bias	J N Ingalis	8 homer		180	101
Total	· ··			5,831	\$1,605
Total shipments by Pan Total Miscellaneous sin	ama steamers		20,126 10,266	**	\$10,225 74,180
Grand totale	****** ********************************	i	59,115		81,114

FANCHER CREEK NURSERY, FRESNO, CAL.,

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White Adriatic Fig. Ten Tested Varietics of Tablo Figs, Olives Pemegranates, and also a Fine Collection of Palms, Roses and Oleanders.

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F. ROEDING, PROPRIETOR, FRESNO, CAL.

For the half year ending with Alst of Discinher SSS, a divided has been declared at the rite of fixed SSS, a divided has been declared at the rite of fixed and one sixth (1.146) per contoper anium on additional days on the fixed has son divided has son divided at the rite of five and interval posits, free of faves, poyable on and after wednesday, January 2, 1889

LOVELL WHILL COLOR.

For the activity conding Describer 31, 1888, a divided has son divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided at the rite of five and divided has son divided has

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DIVIDEND NOTICE.

Description of the Blueberry.

The Bluckerry is a valuable fruit, and is a reliable fruit to grow in our northern States where the more tender varieties of finits wintershill. It is perfectly hardy, having stood 10 degrees below zero without showing any injury to the most tender buds. It tipens in this latitude about the 1st of July, and is beane in clusters like currants; shape, round; reddish purple at first, but becomes a bluish black when fully ripened. The flavor is equal to the nea-plenty, a very mild, rich sub-acid, pronounced by most people delicious. It may be served with sagar and cream or cooked sance, and is spendid for winter use. The plant seems to flourish in all soils, and is a prolific bearer, it grows very stocky and makes a nice hedge. The shiming dark given beaves and the blue fruit making a pleasing centrast. The denand for the fruit is great, and usually brings 15 cents per quart. They commence bearing the first year after setting out, and yields a full crop the second and third year after setting out. They are propagated from suckers and root entrings. The plant is about the herefit and size of the currant bash, and very stocky, helding the fruit well up from the ground. That should be set in the full and spring, in rows two or three field and should be allowed to grow between rows.

TRICE LIST

I Dozen Plants by mail, 60 cents. 2 Dozen Plants by until, \$1.00

100 Plants by Express, \$2.50 1,000 Plants by ex. or freight \$15.00

How TO SEND MONEY:—I would prefer to have money sent by American Express order, all sums of \$5.00 and under, cost only 5 cents, and if order is lost, money will be promptly refunded to sender. If not conversant to obtain express order, money can be sent by registered letter or post office money order or post all note, drawn on Portland, Much. Postage stamps will not be accepted only from our customers that cannot obtain an express order—only those of one cent does minimum wanted.

Plants are carefully packed in damp moss and delivered to express or freight office, for which I make no extra charge. Address

DELOS STAPLES, Portland, Ionia Co., Mich.

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Wines treated under the Fraser Electro Magnetic Process, developing New Wines in thirty days, equal to three year's maturing under the old syst in

R. J. HARRISON, President.

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160 ACRES

TREES AND PLANTS. CALIFORNIA NURSERY CO.,

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LARGEST STOCK ON THE PACIFIC COAST.

Fruit Trees, Olives, Oranges and Lemons, Nut Trees, Wine and Table Grapes, Berry Plants, Shade Trees, Evergreens, Shrubs, Roses, Etc., Etc., Etc.,

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CALIFORNIA NURSERY CO. JOHN ROCK, Manager Niles, Alameda County, Cal.

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Largest and Cheapest Cash Grocers on the Pacific Coast.

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401 Hayes Street.

SAN FRANCISCO, CAL.

CHEAP WINE

To the Editor of the Lond : Tom Sin In the discussions rife upon the subject of • Temperance versus Fotal Abstinctics. account does not seem to be taken of the enormously increased production of wine nor of the visible improvement of it quality as a factor in the case

The misfortunes of viticulture in France and the other old-fashioned wine-grown g countries stronglat de the cultivation and utilization of the vine all over the world, while competition in -t ain transport has facilitated the cheapest possible importation of what are termed "uncommerated wines, Wines hitherto unknown to us find their way from hitherto maccessible vine yards by modern milways to the sea, and thus reach us at a cheaper rate than from London to Liverpool.

We now get good wine from Cape of Good Hope, Australia, California and even from New Z mland, while Italy is absolutely. overflowing with it,

Practically the public share very little in the benefit that should come from such a state of supply.

As President of the jury upon the wines at the late Italian Exhibition, I had the survey of some Soft varieties, and have no hesitation in recording my belief that Italy nlone could furnish and muntain us with plenty of good ware. It a ridiculously low figure.

In proof of this view of the situation, let me say the distributor - the publican to wit may now supply the public with good, henest, published wines in bottles of six to the gallon (usual size) at 3d per bottle and make 20 per cent profit for himself, while, if he will condescend to dispense it in glasses for 1d per glass, he can fairly make 45 per cent profit for this expenses, trouble and risk.

Nothing but the silliest short-signted prejudices prevent this being done. Wines of this class can, of course, be imported, thanks to the recent treaty with Spain, at the schilling per gallon duty, being necessuily -as natural wine-under the limit of 30° proof spirit.

One to novworth of wine taken with two parts of water will furnish the consumer with a "long drink," containing even then as much alcoholic force as beer -- falsely called the "national beverage?" I state my name and am prepared to stake my reputation that this can be all casily, profitably and well done in the manner indicated. I have practically and profitably seen the experiment tried. There are many delicate workers (for the working classes are not all invvies) who cannot, who must not, drink beer, but who, all the same, require stimulant, and who, whether they do or not, will have it, and it is better they should have pure wine than ardent spirits, especially the spirits placed within reach by the retulers. Let coffee-taverus continue to have their chance, honestly competing with the public house, but let wine which is cheap and good have a chance also, and it those who interest themselves so philanthropically in the welfare of the poor, will teach them to drink wine and water, they will, I feel sure, add to their comfort, health and enjoyment, and they will, perhaps a little unexpectedly, find they are on the road to insure true temper-Yours faithfully,

WM. HUDSON.

Expert and Valuer.

CALIFORNIA.

What the Youngest Apprentice Finds to Say About 16.

The climit of California has, of lab year. Lean often discussed by many people all over the univers; and the question is often asked what kind of climate will h find here on his arrival?

To this question we would say, bit him some and pudge for himself, so he will find it just as we recommend it to be. We will ist lam start from New York, or any other astern city, with the ground covered with snow and the wind blowing like a hurrican, and on his urival in this State, it he don't find the latts and vall ys covered with green grass, and vegetation on all sides, why, we will sell out and go back east with him

By the above lines, which are quite true, you will so that while the custom States in wrighed in snow and short, California is enjoying a warm and balmy climate, that covers her bills with given trees and vin s, and fills her good us with thewerand plints.

The tourist, hour or health-sector oming to this wonderful clime, also has his choice of location, whether by the sea sid; where he may dwell near its sandy shore, and bathe and sport in its salty bosom, which is ever healthful to the sick and delight sted, and fun and sport for the lover of aquatic sports. If he prefers rural life he can locate his home up in the foot-hills near the mountains, where he can ramble through its leafy forest, and hunt, and fish through the long summer days to his heart's content. While passing his bright and sunny hours up in these grand heights he has all the luxuries and dainties nature can provide, He breathes the pure and invigorating atmosphere, and drinks from clear and sparkling streams.

To the over-worked and fatigued, I would advise him to spend his vacation at the springs, which are renowned the world over for their peculiar waters and health-restoring powers. These springs are quite numerous in California, and are much of a curiosity, as their water is different from that of fresh or salt water, it comes spouting and healing from away for down in the deaths of the earth. The water has been tested and found to contain sulphate, alkali, non, and other ingredients, according to the locality.

These are but a few of the many gifts that California presents to the humble emigrant and tired and worn-out traveler who muy travel the carth from end to end and yet he would not find a spot so welcome, so ready to receive him as the "Golden State?

After the emigrant has made his selection, and settled down to improve and build up his little home he will find the soil, weather and water all in his favor, and all he has to do is to perform his work well. and see that there is nothing lacking, and in a few years his little home will develop into a beautiful and goodly farm, which will produce him an abundance of all kinds of cereals, and fruits of all descriptions.

Here, in this State, you never hear the poorer class complaining of the cold, which is so customary among the poor and thinlydressed people of the eastern and northwestern States, nor is the cost of fuel so great as in the latter.

The writer of this article was talking to a young man, who was recently from one

vent, and the longer I stay the better I like | Comp day manufactured enters that took the climate of California, it is always mild and pleasant the year round, and I think that this climate is good enough for any two-legged crank, and yet if the day happensity to a little rainy or foggy, you will hear him complaining and numbbing about the disagneeable weather. When hearing ham complain I on hardly retining from pitying him, as I think of the snow stories and eyelones we us dito experience back in the castern States. With the thermone tor below zoro, and wool for above the average princ, it was enough to tack one think of other clim's where the snow never come, but the sun from his distant height gently smiles down on the green and smory land. When I is the clover those many hard winters I have passed through, it fairly makes me shiver as I fic tucked resily in my little lunk,"

This state is open to all comers that are willing to work and help the industries in their murch to victory by s, victory, for it will be but a few years until this State will be the home of the olive and the region of the vine, and will dify ad competitors in the excillence of har wines and finite. S. come, you people of the cold and wintry climates, and drink in our pay, you are all invited, as there is room enough for all-" ARCHIE."

THE SEASON'S CRUIT PRODUCT.

Last season the Fruit Union shopp d East 850 cars of fresh fruit 90 mers then during the 1887 season. Regarding the season's fruit produce generally the Raral Press says: The number of bearing trees last year is placed at about 12,000,000. That this is none too large is attested in the heavy shipments of green fruits to the East, the large quantity dried, and also the large quantity canned. The Southern Pacific Company handled altogether 2,154 carloads, or 1,616,160 packages of fruit, aggregating a total of 13,681,189 pounds, on which were paid freight charges of \$840,840. If a total of 50 carloads be estimated as the amount handled by th Atchison, Top ka and Santa Fe out of the State and as many more by steamer, the netual figures in either case not being obtainable, there would be altogether fully 15,000,000 pounds as representing the total green decidnous fruit exported from Californis, or at least 10,000,000 pounds more than the previous year. Last season the expense of packing grapes was heavy, qual to about one c nt a pound, owing to the poor condition of much of the fruit, each banch having to be hundled and the poor and sundurned fruit having to be trimined out. With a good crop in the coming season it is confidently hoped by the shappers that fully 60,000,000 pounds of green fruits can be sent to the East this year. The New York shipments will be much heavier, as good returns are realized there and there is a very active demand at all times for California funts. The orange crop of last season reached very nearly 1,000,000 boxes. It is estimated that the total orange crop of the present season will be 1,200,000 boxes, of which about onthird will go for home consumption.

GROWING TORACCO IN CALIFORNIA

A correspondent of the R dlands ℓ 20 puple, who claims to have been cone of the largest, if not the largest grower in the celed hills on Kenka. Seneca and Canan-United States," makes the broad assertion daigue, a young man, who was recently from one that California can and has produced the of the eastern States, of which I quote the most tobacco grown in the United States. following. "I have been here just about a and that it was the Consolidated Tobacco. Subscribe for the Memenon."

the his best premium at the east, tar to be says, resulted through losses by no, not the stockhold is not being practical men d'audoned the cut rprise. He adds:

I am pripard to imput practical instruction in every department from the prepiration of the soul balls, the proper proparation of the ground for trans lanting cultivatain to the time of cutting and the proper mode of coring mall us details. No two seetions of California are of the same temporature, having the same amount of moisture, There are dearbolts and thermal belts. I can the could determine who locality. These differ tween quite treatment adapted to the premuir condition. If a man will give me the character of the soil, the timperature trom April to November, the general trend of the wind, the exposure, the character of the water in the section, I will tell him just what he can depend upon and what the product will be.

ALUN LAND SHARKS.

The following list purports to show the amount of public lands in the United States now being own d and held by foreign syndrestes and propositors:

Englist Scholard No. 1 (in Feyas)
English Syn brake, No. 3 (in Lexis
Sur Edward Root, A. B. (in Frontial)
Fig. 3d Sende at the court by S. Philipotts
U.R. L. & Co., of London, etc.
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to think S. San Reafe ACRES, 4,500,000 3,000,000 2,000,000 1,500,000 1,750,000 Philage, Morshall & Copy of London German, Syn heads.
And John Jeron Sochwaster Under Landon Georges in Mossesspirities of Sylv Fam.
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PAVORED GRAPE REGIONS.

Bull-tin No. 7 of the United States Department of Agriculture, on the subject of " Black rot occurs throughgraps savs. out the United States east of the Rocky mountains, on all wild and cultivated vines; black rot is the most serious and impor. tant discusse of the vine in the United States: European vines are more subject to black r t than American, all points in the United States where the rayages of black rot are most severe, the summers are very warm and moist. This is the case espectally in New Jersey, Maryland, Virginia and the Carolinas In Western New York there are quite extensive vineyards. At this point, in consequence of the altitude and exposure, dows and mists are rare, and black rot causes lot little damage."

Exemption from this great scourge of American grape growers', is curely a cause of grantinde and general congratulation among the vineyardists of our favored Western New York region. Long may it be absent from the lake shores and vine

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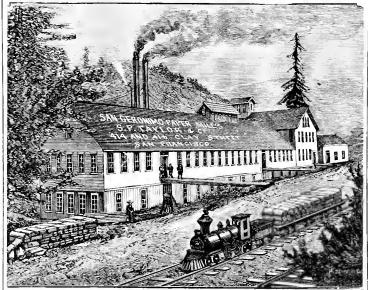
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7.00 P Snasta Route Express, for Sacramento, Marysville, Redding, Portland, Puget Sound and East	7.45 ▲
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VOL. XXI, NO. 11

SAN FRANCISCO, FEBRUARY 15, 1889.

PRICE 15 CENTS

ITALIAN VITICULTURE.

CULTIVATION AND PRODUCTION OF THE VINE WITH CHARACTER ISTICS OF WINES.

An Interesting Account of the Wine Industry, furnished by the Gen eral Italian Wine Growers' Association.

[Contraged from page 116],

SOUTH MEDILIBRANEAN,

The southern portion of the Peninsula bordering on the Tyrrhenian sea, constitutes the touth agricultural section of the kingdom, and includes the provinces of Caserta, Naples, Benevento, Avellino, Salerno, Pot nza, Basilicata, Cosenza, Catanzaro, and Peggio, the last three forming Calabria.

While Paelia is distinguished for the concentration of i.s culture, and especially in the districts around Barbetta, this width remon is, on the contrary, characterised by the wid diffusion of wine culture throughout its wis do extent, from the Abruzzi to the extrematy of Calabria. But in no district is the vine cultivated so exclusively as to give a surplus of three or tour hundred thousand h ctolities of wine for export a tion, as is the case in Poglia and the Abruzzi, and in many districts in Sicily,

This region is very mountainous, with a large numb r of valleys and slopes, having a variable rainfall, but on an average more abundant than in Puglia. It therefore possesses various conditions for production We must also add that the culture extends from the s a coast to the summits of the Appenings, which rarely touch 1,000 metres in altitude, and consequently a great variety of wines are here produced.

Amongst the varieties of common wines which are produced and consumed locally although slightly different in character, there are some which, from very ancient times, have been greatly renowned. In will be sufficient to mention of these Fal reno: and there are to-day still excellent produced near Mount Vesuvius, and those of the Islands of Capit, Ischin, &c.

Taking a rapid review, the wines produced ou the plains of the province-, high degree of alcoholic strength, but vary-, and uniform,

If re the great fertility of the soil is prins sugar which remained from cipally ntilized by the cultivation of cereals. vegetables, and other herbaceous crops. The vine here is considered a second class culture, and is generally associated with trees, and it sometimes develops itself to such a height as to have no equal in any other portion of the Peninsula, or in any other country. The unbalatants of the district are content to cultivate the vine for the more purpose of providing them with a sufficiently cheap and stimulating b verage. The great bulk of these wines are of course consumed locally. In a few very xceptional cases, however, they are exported to other provinces, but only in small quantities.

To-day, much more than ever, the light wines of these districts are mixed with the stronger qualities of Puglia, Calabria, and

Only in years of exceptional abundance, are the wines exported from this district in anything like large quantities, and at very low prices, and then they are g nerally ont to France, but as they contain only a very small quantity of alcohol, sometimes mly 5 to 7 per cent, they are used solely for the fabrication of cheap table wines.

There are, however, in the e provinces several valleys and bills where wines of superior value are produced, but their quannty is small.

The old Falcrno and Formiano, and many ther fitte wines were produced in Campania Febr, and especially in the district at present known as Gaeta; but from the evidence d the obl writers, who record that these wines, mixed with ice water, were drunk at table, it seems they were very different from the table wines consumed to-day. The grapes were allowed to a main on the vines until late to votumu, and gathered when dead rives the rule soft he grapes being consequently very rich, as is done to-day for making Tokay, Chateau Yquem, and some Italian wines called Forzati. These wines were kept a very long time, occasionally in the best old Roman familes, for a hundred years, and according to the piac and year of production diff red greatly in style qualities which are well known to Itanian | The most Inscious and syrappy, notwithand foreign consumers, such as the wines standing the high temperature to which the foreign contemporary with the standing the high temperature to which the foreign contemporary they were submitted, a mained very sweet, are produced than in the two lest moned, and sometimes assumed a honey lake thavor, Aft were tich strong wines, possessing a macertain, the prices are generally moderate

Caserta, Naples, and Salerno, are the first, jung, if course, in condung to the quantity of

how many on the contrary turned the wines, tions, and very few analyses of them have is not recorded by the arcient writers, but be a made. it must be presumed that the proportionate quantity of wine which went had was very represent a special feature. Calabria is large- first, b cause of the nature of the the Magna Grecia of ancient times, the products and of the collars in which they fertility of which was proverbal. were kept, and secondly, because of the practice which has been handed down by them to the present time of adding concen- entirely unpopulated, with the exception of trated must, salt, &c., which was naturally that part bearest to Reggio. It is therefore done for their better preservation.

was produced are to-day almost uninhabit- localities will by diff rent from those which Norther this nor many other old wines can plasures of Sybaris and the other famous be easily produced now; but there is no cities of Greek origin on the Ionian coast, need for them, as all which are appreciated. to any extent have been well reproduced wine culture in Calabria, according to what by some Neapolitan establishments, as for we have noted do visu and the information instance, Giuseppe Scala, Pasquale Scala, received from those districts we did not J. Roufl, &c. R turning to the wines of visit, is the partial character of the cultivathe three provinces of Caserta, Naples, and tion. The visitor, after passing through Salerno, it is still customary to concentrate imb's and miles of country without seeing by fire, a portion of the must. With regard any vines whatever, suddenly comes upon to the quantities produced, it must be said that if these provinces sometimes ex. Sometimes the vine is associated in its culport wines, the quantity imported for home ture with fig and obvoltries, but whirever consumption is very much larger. Howe vineyards occur they extend over an extenever, Salerno, besides Naples, begins to sive area. It may be said that every district supply the wholesale trade with considera, and almost every commune has a certain ble quantities.

The isles of Capri and Ischia, the districts surrounding. Mount. Vesuvius, and ago, was made in proportion to the con-Pozzuoli, can produce splendid wines for xportation.

Basilicata) produce a good quantity of ways, which unite these provinces to other table wines, and in a few localities also parts of the kingloin, the viceyards, in maxing and blanding wines. The Rionero, those localities most favor d by nature, be-Bisile, and Figraso ne well known wines, came so extensive that a regular export was They are produced partially from the fruit colated, the wines being conveyed by small of vines associated in their custure with ships to M ssin's and Napl s, or sent by tice, and partially from vines cultivated rati to the North of Italy. exonsively, which system is extending, specially in that portion of the province near st Pugha. These two provinces pro- Castrovillari and Rossino; the communes due more than they consume, and for the Normation and Ven tren mark to. In his wines, but it exports a ly a small plantity, as though, from what we have been the to

W. Lav. been ab the obtain viry little information with regard to the composition How many were the urns, amphoras, and of the wines of these previous, as they doli mis in which the wines kept well, and have very rarely been brought to exhibi-

The three provinces forming Calabria,

In olden times the flat country was thickby populated, but to-day it is malarious and very probable that the greater part of the The localities in which the old Falerno of the wines now produced there come from ed, and surrounded by malarious districts, supplied the win s which ministered to the

The most striking feature of the present a large district with extensive vineyards. group of vineyards, carefully kept. The extension of the vine culture some years sumption of each little district, but after finding a means of conveying the products The provinces of Avellino and Potenza to the coast and the introduction of rail-

> The localities which have the largest samples of pane, are the two districts of of Circ, Sambase, P.dmi, Campo, & S. also export a considuable quantity of valua-

The wines of Calabria, considered as a while, no the strongest of the Penninsula In this region, light win s at rater and less known than in any other. There may be frequently found fore, becoming wines

of a class which could only be equaled by a few vineyards near Barletta; and if the demand of the northern provinces is greater for the wines of Puglia than for these, it must not be attributed to a superiority in quality, but to the large production of that province.

Besides blending wines, Calabria, especially at considerable altitudes, produces Red Table wines, which develop of themselves in the first year a bouquet equal to that which in other provinces require a long time and great care to attain. The Special Wines, dry or sweet, also produced in Calabria, possess such strength, aroma, and bouquet, as to prove that the favorable conditions of the climate and soil ought to be largely utilized for producing this class of wines. The sweet wines of Gerace have already gained a sound reputation. Calabria also prepares a large quantity of dry raisins (called in the country Zibibho), which are exported in bulk, or neatly packed in elegant hoxes, to Nuples; this proves still more how well Calabria is by nature sdapted to supply sweet and special wines.

If Calabria is not appreciated by the wine trade to the extent its merits deserve, it is because the enterprise and the initiative spirit of the people is not very great, and the large wine merchants prefer to go where the largest emporia are to be found and the transport of goods is easiest. As to the chemical composition of the wines of this region, it must be said that those of the plains around Caserta, Naples, and Salerno, range from the lowest degree of alcoholic strength to 11 per cent; their acidity is generally very moderate; the wines are naturally light and dry, but, with ths addition of concentrated must, rather sweet wines with a large body may frequently be found.

The wines of Pozzuoli generally possess from 11 to 13 per cent. of alcohol.

With regard to the Special Wines of the neighborhood of Naples, twenty analyses of Lacrima Christi gave the average alcoholic strength as 11 to 25 per cent., acidity 7.57 per mille, and dry residue 31.9 per mille. The Falerno of the present time contains a moderate quantity of alcohol and preserves always the characteristic of a very dry wine; Capri possesses an average of 13,4 per cent, of alcohol, 6.5 per mille acidity, and trom 25 to 28 per mille dry residue.

What is known as Vesuvio is similar to Capri. The Moscati and Malvasie contain from $12\frac{1}{2}$ to 15 per cent. of alcohol, from 71/2 to eight per mille of acidity, and from 31 to 40, 50, and 60 per malle of dry residue, according to the year and the quantity of free sugar present. Very few analyses have been made of the wines of other districts in this province; those which we have obtained are given in the following figures: Red Table Wines usually contain from 10 to 12½ per cent. of alcohol, but in Calabria it is very rarely we find wines with an alcoholic strength inferior to 111/2 per cent.; more frequently they show 13 or 14 per cent., while the blending qualities possess as much as 15 per cent. They are always moderate in acidity, and contain large quantities of dry residue.

The temperature during the vintage being rather high, and the winter mild, the special wines of Calabria decompose in the first month sufficient sugar to quickly make them very alcoholic and easy to keep. For this reason, and also because of the steady supply of wines of a certain style, without wasting the grapes, as is the case in the table wines.

northern countries, Calubria is able much better than any other region previously described, to supply agreeable special wines, which quickly develop their bouquet, at low prices.

Another peculiarity, which is also common to Sicily, is the very rapid fermentation which the black grape juice undergoes, as is also the case when it is desired to obtain wine of a very dense color, fit for blending purposes.

Going from north to south of the kingdom, we observe that the grapes improve in color as we proceed. As a corsequence of this, grapes containing the same quantity of color, with only 24 hours fermentation, will give in Calabria a wine much more intense in color than could be obtained from the same in Puglia, Castelli Romani, or in Picdmont, with 3, 15, and 20 days' fermentation respectively.

The average production of wine in the nine provinces of this region, is estimated as follows:-

		I ±	ectalitres
Casurta			380,800
Naples			621.300
halerno			790.400
Leuevento			124.5th
Avel ino	• • • • • • • • • • • • • • • • • • • •		776 800
i Otenza			636 600
Coschza			823 301
Calanzaro			188 100
Reggio Calabro			299,500

Total average for Southern Me literraneau 4,615,300

	a sound of the southern are mentalized 1,010,000	
,	The comparison of this production with	1
5	the population of each district is given be	
ſ	low; ~	
f	Average Districts. production pe	r
ĺ	Litres	
г	Caserta 41 Gaeta 51	,
	Nola 9; Piedtmonte d'Al·fe 75 Sora 15	ž
1	Sora	;
r		
	Average for the Province of Caserta 58	3
	Casoria 11: Castellamare di Stabbia 51	ĺ
	Naples 15 Pozzueli 374	ì
;		
	Average for the Province of Naples. 62 Campagna	
Ì	Sala Consilina ut	1
	Salerno 144 Vallo della Lucania 114	
ļ		
ı	Average for the Province of Salerno144 Benevento	
	Cerreto Sannita	
	S. Bartolo in Galdo	ı
ı	Average for the Province of Benevento52	
I	Arano di Puglia 174 Avellino 243 S. Angelo dei Lomb 105	
1	S. Angelo dei Lomb	i
ı	Average for the Province of Ave'lino 198	
l	Civi-	
1	Lagonegro. 78 Matera. 111	
1	Melfi. 193 Potenza. 114	ł
ļ		
1	Average for the Province of Potenza121	
I	Castrovillari. 279 Cosenza. 83	I
l	Faola 170 Rossano 291	I
١	_	
l	Average for the Province of Cosenza182	١
l	Catanzaro48	
ŀ	Cotrons 51 Monteleoue di Cal 39 Nicastro 73	ı
	Nicastro 73	I
	Average for the Province of Catanzara 182	I
1	Gerace	Į
	Patine	I
ĺ	Average for the Province of Reggio Cal So	
	average for the Province of Reggio Cal 80	I

Total average for the Southern Mediterranean.

The following are the names of a few of the important establishments which export their wines to foreign countries:-

sparkling wines.

Marquis Latiano, Mercato S. Severino, red table wines.

Barra & Solimene, Avellino.

Societa Enologica Avellinese, Avellino, rel table wines.

Ing, Luigi Pircagso, Prato d'Avellino, red

Societa de Napoli, Lanzara & Co., Sa-

Antonia Ippolito, Acquaia, (Salerno), table and blending wines.

De Bonis Bros., Pietragalla (Basilicata). Giacobini Bros., Altamonte (Calabria), varions wines.

Renda Bros, Sambiase, blending wines. Coscina Gerolamo, Nicastro, blending wines.

Marabito Bros., Mongiane (Calabria), red table wines.

Cav. Nunziante, Ferdinando di Reggio, blending wines.

Genovese Zerbi, Palmi.

The principal establishments in Naples which produce and sell Table and Special

J. Rouff, Giuseppe Scala, Pasquale Scala, In Torre pel Greco:-

Giovanni Attanasio, Turese & Viticllo.

[To be continued.]

COTTON SEED.

The cotton seed which of late years ha been put to such profitable uses is steadily increasing in popularity, says the Commer cial Bulletin. Heretofore the seed after h ing taken from the cotton boll was throw away, but now it is about all put to use an readily sold. From this valuable seed a extracted the much us deotton seed oil, and from the residuam are obtained cotton and meal, cotton seed bran, and cotton seed half ashes. The seed after being taken from the cotton gin goes through a "linter machine,"which takes off the short staple cottor which the gin does not remove. This short staple cotton is sold mostly to concerns who use it for cotton batting. It is also used for other purposes. After all the fibre is taken off, the bare seed is cracked and the kernel is separated from the hull. The kernel is then ground and put under severe heat or cooked. In the heated state the most oil can be extracted, and it is therefore put into a large iron caldron and is subjected to a heavy pressure. thoroughly pressed, the residue or meal is in the form of cake. Cotton seed oil is used for numerous purposes, and it is displacing other popular oils, owing to its cheapness and healthfulness, as it is purely a vegetable oil. This variety of oil is used largely by lard manufacturers, who adulterate their lard with it.

Although most people would prefer pure lard, it is claimed that the cotton seed oil adulterated with the hog fat lard improves the quality of the stock. The hog lard contains more than twice as much water as the seed extract, and consequently one pound of adulterated cotton seed oil goes much further than the pure stock. Large quantities of the seed oil are yearly shipped from this country to the countries on the Mediterranean, where olive oil is produced. It is used almost wholly there to adulterate the clive oil, which is then sold both in this country and in Europe, as olive oil from the Mediterranean countries. Most of the sardinca are now packed in this new oil, and it proves to be successful. Bakers | It is attached to the brow-band of the bridle also buy barrels of the liquid, which they Visocchi Bros., Atina, red table and advantageously use in substitution for the more costly lards and greases. Chemists and druggists use considerable also. The white or refined stock is used to quite an extent in the Pennsylvania coal mines for lamp oil. Although the cost is much higher than petroleum, the safety of the variety is preferable to the more explosive kerosene. The crude stock is used extensively | not clumsy and does not clog in action."

in the manufacture of soap, as is also the foots or residue left after the oil is made. As above stated, after the oil has been abstructed from the kernel, the caked mest is left as a residue. About 150 mills which utilize the cotton seed, use both products, the oil and residue or meal. Most of the residue is sent to England in cake form, where the farmers crack it and feed their cattle with it. A large amount has been satisfactorily used in the West, and now it is boing sold in this market, it is claimed, quite successfully. This meal is claimed to excel all others as feed for cattle. That used in this country is not in the cake form, but ground, and now brings from \$26 to \$26,50 p r ton. Last year the prices ranged from \$23,50 to \$21 per ton, the advance being caused boan unprecedented foreign lemand. Cotton seed meal is not only dained to be better, but also cheaper than oth rim als. In St. Louis there is signified a mill which mak's cotton seed Iran from he bulls, and claims that it is superior to ther course field, and costs much less, ringing about \$21.50 per ton. Most of the aills barn the hals of the seed for full aid sell it for f rulize g purpos s. These ash s re beagnt by form is the conjugation with he meal and mix d by them for fertilizer. This mixture is -aid to contain an abandsuce of potash and phosphoric acid, which anve very powerful f itilizing properties. The ash s are worth from \$30 to \$32 per ton. This fertilizer is not exported, but used here in this country, mostly in the Jonnecticut valley, by the raisers of tobacco. The supply is limited, and dealers say hey could have sold twice as much if they had it.

AN IMMENSE ENTERPRISE.

The Agricultural Committee of the California Fruit and Wine Land Company held a session this week at the farm and gave orders to the superintendent to engage a large force of teams and men immediately in addition to the force now at work, and the work of plowing, scraping, leveling and planting this season will now begin in earnest. The olive trees, about 3000 in number to be planted on the knoll, on which the Superintendent's house stands, have arrived and will be immediately set out. The two immense rams, for furnishing the knoll and reservoirs with water, have been put into position. The ucreage devoted to raisingrapes and oranges will be largely increased the next few months. The orange trees already set out are doing well and are grow. ing even in winter. The company is much encouraged with its success so far and will increase the size of its orange orchard and raisin vineyard as rapidy as possible. It has both the confidence and capital to show what this section of country can do at fruit raising.

PULL DOWN THE BLINDS-An ingenious device for controlling excitable horses has been invented, says the Indiana Furmer. and a light but firm cord runs through loops along the reins to the hand piece. "In case of a fright full the cord, and instantly the horse is blindfolded. This diverts his attention from the object of fright and puts him into another train of thought. Let go the cord and the double spring icstantly withdraws the blinds from the eyes and rolls them out of sight. This device is

THE OLDE

Some Theoretical and Practical Views Regarding Its Cultivation

(By Arthur Tappin Mars n.

There is perhaps, no variety of fruit oul ture in the State that is at the present time attracting more notice than the olive At the same time to all except the nursery man and owner of the day, ranch, it is but little understood. The int isst in its culture is manifesting itself in various ways the testimony of any propintor of an olivfarm on this sulp of as greedily caught at the lists of all nurseries show it; the late display at the Michanics' Fair this summer, where an exhibit from the Quito Farm of an olive tree, oil and processes, and the large crowds it attracted all go to show that in the minds of many practical metthe olive is already considered as one of the large industries of the Scate Ignorance on this subject is perhaps the only reason that deters many from a lting the olive out; it is therefore with ideasure that we hail a work on the subject, written from the pen of a gentleman who has studied the olive with such close attention both in Italy and at home, and whose knowledge now given to the public must add materially to the development of its culture in the Unit d States.

Mr. Marvin in his introduction v ry appropriately didicites his work to Mr. Elwood Cooper of Santa Barbara, who is the acknowledged father of American obveculture in California. He refers to the interest he has taken in the clive since 1882, when his friend, Mr. Edward E. Goodrich, purchased the Quito Olive Farm in Santa Clara valley, and during whose absence in Enrope of four years he took direction of This knowledge of Spanish led him to study the writers in that torgue, and through the kindness of his friend in translating the valuable information contained in the works of Prof. Caruso of Pisa, also of Signor Guito C ppi and the manual of Signor Raffallo Pecori of Florence, the leading nurseryman of Italy. The last work is still unpublished, but permission has been given his triend, Mr. Goodrich, (who has been spending his four years in Italy studying the olive culture, to make use of his manuscript. Thes works, to gether with many others in French and the experience of the late foreman of the Quito Farm, Signer Ludovico Giddi, a native of the province of Lacen, and one as the Italians say, "born under the olive." have, with his much study, made this work most interesting and instructive.

The book is a tasteful volume of 146 pages, bound in green cloth, and combines valuable plates, of the various species, the mode of prening and grafting, its posts, etc, all taken from works prepared by the Agricultural Department of the Italian

The headings of the chapters are well selected. That of the first runs. "The trees went forth on a time to anount a king over them, and they said unto the olive tree, reign thou over us,"

Herodous tells us that in his time in Athens the olive was cultivated, and in laws of Solon, six centuries before Christ, its culture is mentioned. The Remans used it in the gymnasium, and sold the acrapings of the citizens exercising there for 60,000 sesterees. These scrapings were supposed to be endowed with great the olive with reverence and awe, the or picking, but has been imposed upon, Which contains the interesting study by Subscribe for the Mekenesia

Greeks dedicated it to Minerva, and the Romans mingled the leaves in the triumplied crowns of their defenders.

The ancients used the oil for anounting the body, but the modern as s are fer food, light, soap, dying, perfamity, drugs, the manufacture of cloth, machine oil, and a host of oth r ways

The demand for olive oil greatly exceeds the production. Italy comes first, and produced in 1880, \$6,000,000 gillens. which is the highest return, and devotes 2,250,000 acres to its cilture. Spain while producing 150,000 gallons, exports only 10,000 gillons on account of its unmarker. able quality.

Trance produces 9,000,000 gallons, but altogether the three countries do not export mere than 30,000,000 gallons of oil, most of which goes to France, while little or none finds its way to this country that has not passed though the hands of the "doctor" in adulteration. The California grown olive shows a marked difference in point of size to the Italian, a tree at ten years old being both larger and more productive, The author puts its possible period of life to be 300 years,

ON THE SUBJECT OF THE RETURNS FROM AN OLIVE PLANTATION,

The author thinks that in California we may safely calculate a gallon of oil per tice. The maximum yield is 20 per cent of oil for weight of berries, from that down to 10; if less than this, it should be dug up and a better variety planted, A large and fully developed tree has been known to yield as much as 16 gallons of oil. About 50 tr es to the sere is the present mode of planting and the price paid this year for quality known to be joire was \$15 per gallen.

ON THE SUBJECT OF ADULTERATION,

Mr. Goodrich, while in Florence, Italy, found it each year an increasing difficulty to procure pure oil; in fact, the manager of a large olive grove in the vicinity, teld lain he did not b heve it possible to procure any there. Twenty-seven per cent, of all the cotton-seed oil shipped from the United States is used to adulterate alive oil. In Italy it is poured over the clives in the ernsher to thoroughly mix the two oils. Mr. Marvin explains the many articles used to adulterate, and cites a simple and homely test for the detection of it, viz.. To heat the oil till it smokes, in some smail vessel. The smell of the olive oil is not disagreeable, only suggestive of the kitchen; while any counterfait oil, and especially cotton-seed oil, is exceedingly off usive to the nostrils. If placed on a refrigerator, pure oil will remain unchanged, while adulterated oil will thicken and congeal.

The second chapter deals with the species. There are no less than 35 in number grown in Europe, Asia, Africa, America and Oc anica. Of those grown in Europe, the author groups in four classes, viz the first as oil-press olives, second as middleclass olives, third as seedling olives, and fourth as wild edity a.

The Mission, known on our coast, or Corninglers in Spain, is one of the best class though there are others that are of superior quality as oil-producing olives, but on this point we must refer you to the work before us. The Picholine, so called, comes under the second class, and the author very fearlessly easts a suspecion on the genumeness of this variety grown and known in California. The original inporter, he maintains, had the intention of curative properties. The ancients regarded introducing the Queen olives, a large olive

not ally useless for the production of conbut the vary best steel, upon which to grift

On the climits, in which the east will flourish and froit, Maryin tak's the zone between 45 and 18 decrees north ichtude and the same south, with a temperature places north of similar altitude teach the northern I mit in California A southern Aposure, where there is a good free on mlation of air, is generally the most desirable for planting. This chapter on climatis most interesting and deserves careful stroly

11112

The olive will live in almost any soil, except a dry and compact, or a humid one. The analysis of the ashes of the word, leaves and fruit shows that potash and limare the main ingredients. The deduction, therefore, is that soil possessing these ingredents is necessary for the complete development of the plant and production of good fruit.

In general it may be said that the olivrequires the same kind of soil as the vine as they flourish well when grown together Very interesting tables are given as to the absorption of humidity from the atmosphere-It was thought that the plive would not grow if planted more than 90 miles from the sea. but it has been well established that it can be grown at any distance inland, provided the sed and climate are agreeable to it.

PERMITTINGS.

In the rich and almost virgin soil of California, it is probable that at present, fertilization may not be necessary, but where soil is light or poor it has been found by the Redian and French student that the planting of beans, hipins or vetches to be plowed under in the spring are good manur . The refuse from the oil-making, the ashes from the burnt branches in pruning, the dregs of pressed grapes, old rags and boots and many other things are given to and in restoring to the thre that which it has lost in fruit, leaves and wood. Under this head the author describes the season to manure, the different kinds of manure, the white orehard, east of town, and is prothe amount and probable cost of cultivation and other p riment matters in caring for its culture

In speaking of the multiplication of the olive, he says it is grown from seed, cutings, from truncheons by grafts, suckers, from knote or by laqueting and by pieces of the root; and full directions are given for each method as well as for the grafting

CONSOCIATION

In Chapter VII, Marvin says. "Many in California who foresee the probable success of olive enture, dread the loss of time in the making of an olive orchard as compared with other fruit tarms." To them this chapter wid be of special int rist, for it tells of the old way of consociating olives with other trees, vines, etc. This plan is being adopted on the Quito Farm with vines, and appears successful.

PREPARATION OF THE GROUND,

This chapter treats fully on this head and indicates the value of extreme care in ulture as well as in transplanting

For want of space we must leave the cember to study the chapters on Pruning and Pests for himself, and will proceed to that on

HARVEST AND PRODUCT,

as the similarity of growth, the size of the Italian, Vistrian and French's ientists on berry, its low stature and its hardness all the d v lopus at of the clave beary; and it pronounced its being one of the various is to be hop I that our Agricultural Deforms of wild olive, and he condends it is purment will eventually back an exhaustive in of the Cartesia truit

A partial Appropriate being hards this season by Dr. Layton of the Microscopical Department at Woshington, The examination of the one berry is the formation of the oil glos on is most interesting, and the not less than 57 digress P - C dea and conclure us as to the time of harvest will be of value, while experiments will decide s ventually the California harvest-time. The various modes of harvesting are given, and some estimates of probable production.

EXIBOTION, FIG. OF THE OIL

The chemical elements of the oil are given in this chapter, the proportion of oil to fruit, the simple methods of the past, the various and more complicated methods of to-day for extraction. To this is added a list of the dangers to the oil in the proass and in storage. "That cleanliness is next to godhness' seems to be especially true in olive-on extraction and storage.

The author notes that olive culture in the future is destined to be of national importane, and not limited to California, which is, perhaps, however, the most favored locality, and in closing his most interesting work (which cannot be reviewed fully in the space at our command, says that the time has come for the State and National Governments to act. "What might not be the value to this State of the knowledge, skill and experience of a trained expert on the culture of the clive and the processes of oil expressing, if the services of such a one could be secured for a sufficiently extended time to allow a fair application of his knowledge to the new country, soil and climate! Certainly such an experience would be biss costly in the end and more satisfactory than to send an American abroad to study the enliure."

PICKLING OLIVES

this enture in this section is gradually working its way to the front. A Pomoun Tows reporter last week visited the sc ne of G. C. Muir's olive pickling operations, at his place south of town. He has charge of gressing finely with the work of pickling. We saw ther olives in all stag s, from the newly picked to the thoroughly picked, rich flavored. Before beginning op rations Mr. Muir visited the Kunball Brothers, at National City, and the famous Elwood Cooper place at Santa Burbara, and studied the methods and plans which are employed in producing their well-known and popular brands of olives. Mr. Murr has now about 1,500 gallons put up in from two to tengallon kegs. He also has 1 000 gallons in the lye vats. The gathering of the entire crop from the seven acres will be completed this week. The yield will be about 3,000 gall us of pickled olives, and those who claim to be experts pronounce them to be (a) superior to the imported product. They are large and possess that neb, butty theor which makes the olive so great a favorite with opicures. Some experiments have been made also in extracting oil, and have resulted most satisfactorily. The process of pickling olives, as well as of making oil, is it dious, requires close attention, patience and work, yet Mr. Muir says he is satisfied that, counting all these things in, the olive will pay handsomely

THE LEMON

Best Varieties to Plant and Method of Handling Crop.

There is no fruit that has a more promising future in this State than the lemon, It is a tree that fruits well, blooms all the year round, and is ripening its fruit in every month of the year. The best varicties only should be planted-such as will undergo the enting process. A marketable lemon should not be large, but of medium size, sweet rind, and strong acid. The common seedling lemon does not pay to grow; its keeping qualities are very poor; if put to curing, as soon as it leaves the process will be found to be worthless, as almost every lemou will show signs of decay. Therefore it cannot be expected that lemons of inferior quality will pay their culture. The varieties described under this head are of foreign origin, and are recommended (excepting the sweet lemon) as being marketable prolific bearers, good keepers, and such as the fruit growers should plant for profit,

Lisbon. Imported from Portugal. Fruit is of medium size, fine grain, sweet rind, and very strong acid; a very few seed . The fruit grows very uniform on the tree, a good keeper, and a profitable bearer. Lemons can be picked from the tree at any time of the year.

The tree is a strong grower, and makes a larger tree than the other varieties described under this 'head. It is quite thorny, but thorns decrease in size as the tree grows older. A very desirable variety.

Villa Franca. Imported from Europe. Is of medium size, considered to be the finest lemons grown. This lemon has fruited in Los Angeles for several years in the orchard of J. W. Wolfskill. Fruit oblong, slightly pointed at the blossom end, rind thin, without any taste of bitterness. even when green; acid strong, juicy, nearly seedless. Tree thornless, branches spreading and somewhat drooping, foliage sufficiently abundant to prevent the fruit from scorching. The variety has the name of withstanding a lower temperature than any other imported varieties.

Genoa. Imported from Genoa by Don Jose Rubio, of Los Angeles. Medium size, oval, sweet rind, thornless, and nearly seedless. Tree is of a dwarf habit, a good keeper; one of the best.

Asiatic, Imported by J. W. Wolfskill, of Los Angeles. Fruit medium size, oval, thin rind, without any trace of bitterness under the most careful tests. Tree and fruit resemble the Genoa, but a better acid. thornless.

Sicily. This lemon was about the first cultivated in California. Since then many other varieties have been introduced which are far its superior. However, if put through the proper treatment will produce a good lemou.

Sweet Lemon. (Sweet Lime, Lima.) This variety was cultivated by the early settlers; it must, therefore, have been introduced by them from seed or cutting. The fruit is different from all other curus fruits. It is not like an orange, resembling the lemon. General Vallejo says "that he remembers having eaten this at Monterey in 1822 and that he saw trees that same year growing at the San Gah riel Mission." The fruit is very sweet, although the pulp is very coarse, is esteemed hy many, especially for its sweet scent, but the demand for it is very limited. Best varieties of California origin are:

Eureka A native of California, originated by C. R. Workman at Los Angeles, from seed imported from Hamburg in 1872, only one seed growing, from which buds were put by him on orange stock. Introduced to the public by T. A. Garey, of Los Angeles. Truit medium size, sweet rind, a good keeper, considered by many to be the best, but the drawback it has is the leaves are inclined to curl, scarce foliage, fruit produced at extremities of branches and liable to get sunburned; does better when grown on large scedling orange stock; the tree is thornless.

Agnes. Oliginated at National City by Mr. Frank A. Kimball. This lemon is of superior quality, medium size, sweet rind, pulp very fine, with strong acid and very few seeds; thorns few, short and blunt, is a rapid grower, but drooping in character; medium dwarf. This lemon has fruited for six years with Mr. Kimball, and hus proved itself to be a good keeper and a very desirable variety.

Olivia Originated by George C. Swain at San Diego. Fruit of medium size, and said to be of excellent quality; strong acidand a good bearer; thorny.

Garcelon's Knobby. Originated by G. W. Garcelon at Riverside. The fruit is of medrum size; when cared very thin rind, juicy, and the tests have found it to contain more citric acid to its size than other lemons.

Miscellaneous Varieties. The varieties under this head have no particular value. rendered so by the bitterness of the rind. and bitter acid. They should be discarded, California Sicily. This name has been given to the common S edling Lemon. The Bouton, originated by General Bouton at Los Angeles; a vigorous grower; sweet rind when cured, but tree very thorny; fruitful of seed; a poor keeper.

The Brunie Brue. (Higgins Lemons.) Originated by II. M. Higgins, of San Diego. A vigorous grower; tree thorny. The foliage is different from any other lemon, resembling the Chinese Lemon. Size medium; rind thin, bitter. Fruit ribbed, somewhat like the muskmelon.

The Sweet Rind is a California seedling. Fruit very large; free; very thoray; in-

The Chinese Lemon was extensively cultivated in California as a stock for building the orange upon. This practice was soon abandoned, for it was found that the fruit grown upon it was very coarse and sonr. which rendered it unmarketable. The root begins to decay about the second or third year after the buds begin fruiting. The root is not strong enough to hold the weight of the top made by the orange hud, and being brittle, the trees are blown down by the wind. The fruit is used for preserving purposes, similar to the citron. Iu California it has never come into favor. The tree is dwarf. It fruits all the year

GATHERING THE CROP.

In this State, March, April and even May and June, are the best months in which to ship the general crop. Oranges grown in the northern and central parts of this State color much earlier than those grown in the southern counties, but no oranges are tipe then (excepting early foreign varieties), but being highly colored, they can be placed in the market in December and January. The tree should never be picked clean; only the ripe fruit years old, which have as yet not been in grape purchasing public.

the trees. The clean, bright colored, smooth, tine skio, and firm oranges will always command the best prices. - Exchange

----PRUNES AND APRICOTS.

A Santa Clara valley producer, speaking from personal experience, says silver prunes should be fully ripe before drying. but not "mushy" soft. You should avoid bruising the fruit, for bleaching, like beauty is only skin deep, and seldom hides what lies beneath. You will find that such bruised spots will change in color to brown if not black, and, if badly bruised, will look when cured more like a "Tar Drop" than a "Golden Drop" A tur color warrants tar prices, while a golden color warrant golden prices. In dupping the silver prun before drying, you will find that, like th-French, many of them will not "cut," no matter how strong or how hot the lye, o the length of time they remain in it. U if the prunes are placed on the trays to dry you cannot feel positively e rtain a to whether you will make a goin or a los from the business.

If they do not "cut," are very soft no flatten while on the trays, or are green and hard, it is not a difficult mutter to balance your prune account by profit and los The sooner the fruit is bleached after b ing dipped the better, for if the bleaching is not done immediately after dipping th prune will change in color to a dark rusett, which color I have nev r been able to wholly remove. The quantity of sulphur used depends upon the time required to bleach and this depends upon the condition and construction of your sulphur box or house, as well as the rapidity with which the sulphur burns, the condition of your fruit and size of your sulphur box I have found it necessary for the reasons which I have never been able to fathom, to bleach silver prunes in some instances for sixteen hours, while from two to six hours is the average time; and in some instances the results obtained in two hours could not be improved. Four pounds of sulphur on an average is sufficient to bleach a ton of silver prunes, provided your sulphur box is tight and will receive the quantity at a charge.

As to drying, I find that the best results can be obtained by drying in the sun; in fact. I have never seen strictly fancy fruit of this variety cured in any other way. While drying, the fruit should be covered over at night, and when sufficiently cured placed in your packing-house in bulk to go through the sweating process. To produce the most attractive appearance, silver prunes should be flattened when about half cured. I employ an ordinary fruit press for this purpose. Some of the prunes will become more or less discolored while drying. The cause for this I have heen unable to discover. Some dryers claim that it is due to the fact that the fruit has not properly matured, which possibly is the cause. This discoloration not being discernible until the fruit is almost dried, I have fourd it impossible to pro. vide against considerable loss from this cause. After the fruit has gone through the sweating process, but before it gets hard and dry, sort and pack it. I do not consider that there is any need of dipping in hot water just before packing, as I have never found a worm in or about the truit. I have dried silver prunes three

should first be picked, thus lightening up jured by worms. Three pounds of fresh fruit will make one pound of dried, except in the case of late irrigation or very small fruit, which requires somewhat more.

With approximate truthfulness I may now quote the closing sent nee of Josh Billings' speech on "The First Baby," "That is all I know on the subject." Those who know more or are better posted I hope will arise and explain.

When fully ripe shake them on a sheet from which pour them into your boxes. Gathering the fruit in this manner does not injure it if pitted within a reasonable length of time after shaking. Two men an gather in this manuer as much fruit as ten men by the old method in the same length of time. As long as the pulp adheres to the skin the apricot is not too ripe. If the flesh has left the skin, at which soint ferm ntation sets in the fruit when iried will become discolored and black and Imost worthliss. If fermentation has het ist begun, sulphuring will check it, and or dried fruit will be found to be but little quired. Bleuch the fruit there ghly, couphur will not injure it in tar least, esescially in the eyes of the trade, provided is dried in the sun. When properly ured remove from the trays to the pacl schouse, sort the fruit and put it in bulk of allow it to swent. If your apricots re large, five pounds of fresh fruit will take one of dried; or six pounds is the avrage quantity required. I produce the inest dried fruit, both in looks and flavor rom the variety known as Moorpark,

BELIEVES IN THE WOODRUFF.

Mr. Geo. W. Campbell writes as follows to Green's Fruit Grower:

I find you reported in the proceedings of the American Pomological Society as saying in reference to the Woodruff red grape; "Bunch small, quality poor, very pulpy

and foxy, but productive and handsome,

I think this does not fairly represent the grape, especially "small" as to buuch, which, as I have seen it, is very large, both io bunch and berry. Quality is a matter of individual taste to such an extent that I never question any one's opinion on that point. But nine out of ten who have tisted the Woodruff in my presence have expressed delight as to its quality, and pronounced it very good. And about nineteen in twenty would call it at least good. I have heard parties express a preference for the Woodruff over the Delaware. So much for quality. For myself, while I would not call it very poor, I should not, to my taste. class it as very good, but I do think it as good as Concord or Ningara, and it is earlier in ripening than either. I think, also, it will be for general culture one of the most popular and generally useful red grapes we have. It is so strong in growth, so productive, so healthy in foliage, and so perfectly hardy, combined with large size, beautiful color and early ripening, it must be popular and valuable, especially for market. And its quality will be found good enough for the great mass of buyers and consumers.

I know no other red grape with so many of the requisites for a popular grape for every body to plant, as they do the Concord: and unless something hetter, and with more good points soon appears, I shall expect to see th: Woodruff take a place beside the Worden and Concord in the estimation of the grape growing and

GARION

The following is the corr spondence be tween Gov. Waterman and the Director of the U. S. G. atogical Survey, relative to the irrigation of the arid lands of California;

SACRAMENTO, D. c. 10, 1888.

W. F. Vilas, Secretary of the Department of the Interior, Washington, D. C. Sur. 1 am informed that at the list session of Congress an apprepriation was mad for the survey of the and regions of the United States with a view to use rhim the best location for r serveirs for the storage of water for irrigation and to party for public benefit such reservoir sites as an still upon the public lands. I am also in form d you are new forming sary ying parties for the purpose of such surveys

My object in writing this communication is to present the claims of California to a share of the benefits which may accrufrom the expenditure of this appropriation

In support of this claim, I have the honor to represent that there are large areas of rich soils in this Stat - which have a small rainfull. These areas have a semi tropic climate, and with irrigation would grow semistropic productions of monetis value. These at as are located along the eastern slope of the Coast range, and extend from the northern portion of Shasts county to the southern boundary of the State, a distance of 700 miles. The average width of this helt is 20 miles, or 8,960, 000 acres, which must be irrig ded to be of public or private value. Intersecting this long belt of land there are a large number of streams draining the whole Coast range, which carry large volumes of water in the rainy season and which are dry in the summer and autumn months, when growing crops need water the most.

In the Coast range, near the sources of these streamms, there are narrow valleys. ravines and canyons that with small cost could be converted into storage basins for an in xhaustible supply of water.

It has been proved beyond doubt by experiments extending over a period of years that with water these lands will grow cotton, sugar bests, tobacco, oranges, lemons, prunes, aprico's, olives, ra sus, grapes and many other semi-tropic productions, as well as a long list of deciduous fruits,

If these lands were cultivated to thes various products they would supply much of the large amounts now imported from foreign countries. We have proved by umple experiments that 20 acres of such land, irrigated and planted to these somitropic products, will yield a liberal support to a family, and therefore you will see that this belt of land, now and and comparatively valueless, would become the home of a population equal to that of some of our larger States.

The annual production and wealth which the development of these lands would give would be enormous. It is therefore of the first importance to the United States and to California that the steps contemplated by Congress in making this appropriation should be taken at once

I respectfully invite your earnest attention to the claims of this section to a fair where of the bone fits of that appropriation and urge your early action thereupon

R. W. Waterman, Governor

DEPARTMENT OF THE INTERIOR. UNITED STATES GROLOGICAL SURVEY Washington D. C. Jan, 11, 1883. J

To His Excellency R. W. Waterman, treeernor of California, Sucramento, Cal., -Sig. winds, extremes of heat and cold at flower- 140 degrees Fahr., and gradually raising it with some dark-color- I paint.

California to share in the advantages of the irrigation survey, has been referred by sensitive period. the S cretary to the Director of the Geological Survey,

In response, I have the honor to assure you that the importance of irrigation surv y to the agricultural interests of Califor nia is profoundly appreciated, and that there need be no fear that the State will fail to receive its due share of attention. As set forth in the accompanying executive documents, it is believed that the special surveys for the selection of reservoir sites and the segration of irrigable lands should be insed upon a general topographic survey, including the entire eatehin at basis of each stream. Such topographic surveys have been in progress under the direction of the Geological Survey for several years, and portions of Central California and South in C. lifering have been included in this work. The appropriation made by Congress to inviate the special irrigation investigation could not be economically olumister d by the simultaneous institution of work in each of the fifteen States and Territories of the arid region. As will report to Congress, it was thought best to organize only five parties at the start and to select for the work of these parties a series of representative localities, calculated to develop as rapidly as possible the methods of work which would prove most advantageous.

It is hoped the Congressional appropriation for the n xt fiscal year will permit the corps engaged in the irrigation investiga tion to be greatly enlarged, so that the work can be rapidly carried forward at a large number of points.

J. W. Powell, Director

THE MUSCAT GRAPE,

H. W. Crabb, writing in the California Florist and Garden, says:

The White Muscat of Alexandria, is the well-known grape which furnishes the Muscatel raisins the world over. Bunches, very large, long, loose shouldered; berries, large, oval, unequal in size; skin, thick, pale amber, to rich golden; thin white bloom; ilesh, firm, moderately juicy, sweet and rich; fine muscat tlavor. It is known under twenty or more synonyms. I have imported twelve varieties myself, each reputed to be something superior, but when all are grown side by side in the same soil, the quality, flavor and all the characteris ies, were the same, excepting a slight change in the shape of the berries, which only amounts to a distinction without a difference. It is a heavy bearer, producing two crops in one senson. It grows vigoronsly for eight or ten years, and then begins to decline. Its vigor and longevity may be extended by grafting it on to more vigorous stecks, such as Mission and Flame

The vine should be pruned short on thin soils, but on rich soils and irrigated lands a couple of long caues may be left, bring always careful to not overload if cultivating for raisins. The vine is subject to mildew and couldre. The former is caused by

you call the attention of the Secretary of have an application of sulphur just at the feetly dry and the patients bore it well, the Interior to the desire of the State of commencement of blooming, so as to prevent the presence of any mildew at the most

It was probably first imported into this State by Mr. Delmas of San Jose, some thirty-six or eight years ago. It is grown in every clime where grapes are cultivated, from California to South America, from the hot-houses of New York and London to the Cape of Good Hope. If I were to have only one choice from the whole cataloguof vines, I would select the Muscut; for it is the prince of grapes. For raisins it has no competitor. For the table or desert it has no superior. For canning and preserving, it is unexcelled. For jelly it is unsurpassed by any other. No hot house list is complete without it. From it the finest sweet or liquor wines of the world are made, such as Vino Santo, Mescatta, Lachryne Christi, etc. The rich muscadine wines of Cyprus (such as Mission and Flame Tokay) are said to become like syrup with age The Lagrimas of Malaga made from the Museat, are even superior to the world renowned Tokay It is the grape which furnishes the celebrated Huasco raisin of Peru, the most deficious raisin known to combe seen by the accompanying preliminary merce. They are grown by irrigation on clevated red volcanic soil intermingled with fine quartz gravel, which accounts for the thinness of their skin. The bunches are hing up in the open air with a slight covering of brush as a protection against the scorehing rays of the sun, and are left to cure in the shade, which is the cause of their being without bloom, light in color and translacent.

CHALK FOR CONSEMPTION

A German physician, Dr. Louis Halter, having observed that workers at the chalk kilns in his country do not suff'r from phthisis, deduced from this the theory that the high degrees of heat to which these laborers were subjected was the cause of their immunity. The workmen are exposed once or twice daily from ton to thirty minutes to an intense heat, the bodily temperature being raised sometimes as high as 160 degrees Fahrenheit, with consequent increase in pulse and respiration, diaphoresis and rapid tissue changes. They drink very large quantities of water and considerable alcohol. Dr. Halter says that the temperature of air in the lungs is normally about 100 degrees Fahr., which is that most favorable to the development of the tubercular bacillus. If the inspired air be raised to the temperature of say 113 to 122 degrees, the lungs will be heated beyoud the point favorable to the growth of the buerllus. The practical applications of this theory as proposed by Dr. Halter are hot baths, inhabitions of dry air of a high temperature, and the addition of antiscpties to the hot air when desired. Forced inspirations are interdicted and inhabitions. are made through the mouth only, as the mery, terminations in the new are too sensitive to bear the heat

Independently of Dr. Halter, an American physician, Dr. Weigert, residing in Berlin, has been making experiments in the same direction. He finds that the tubergle bacillus dies outside of the body at dampness, want of circulation of air or a a temperature of 106 degrees. Fahr , and is murky condition of the atmosphere, and unfavorably affected by one of 100 degrees, may be prevented by timely applications of Experiments, have been made on patients sulphur. The latter is caused by strong beginning at a temperature of from 101 to

GOVERNMENT WORK FOR TREE. Your favor of December 10th, in which ing time, and by mildew. The vine sheedd as high as 176 degrees. The air was percontinuing to infide it for from three to four hours a day for a mouth. The general effects are represented as having been remarkable, the patients becoming quite robust, and the bacilly in the sputum which had been very numerous, rapidly diminished in number and gradually disappear dislogeth r

> It had been says stad by one commentor that perhaps the chalk dust might have something to do with the immunity of the laborers, but Weigert's experiments seem to show that if there is anything in the new treatment, het air is alone to have the ere lit of it.

> Both Halter and Weigert use dry air; Kroll, another experimenter in the same line uses moist air, his work ante-dating that of the other observers named, and favorable results have been reported by hum also. So the idea is not wholly new, but is very philosophical, . Acetyst,

RENOVATING BUN-OUT ORCHARDS

The following article on the subject anpears in the January number of American Agriculturist:

We often meet with an orchard of apparently healthy trees, which is practically fruitless. The owner may tell us that it formerly bore abundant crops, but of late years the trees have "ran out," Why have they "run out". They formerly gave good crops of apples. All the other land on the farm was expected to give but one good crop, but this of the orchard was made to give a crop of grain, or a crop of grass or clover, to be taken off as hay. The soil soon became tired of doing this double duty. The trees "gave out" because they were robbed of food, the first thing they need is feeding. Of course if the soil needs draining, lay the needed tiles at once, or as soon as the soil will allow. Such orchards are usually in grass, draw on a heavy dr-ssing of manure and spread it, and, as soon as the soil is in proper condition, turn over the sed and the manure with the plow; with the het weather the sol will decay rapidly When this is found to be well rotted, give another plowing, and a despone. If ash s can be had, spread a heavy coating and harrow; in the absence of ashes, harrow in a good dressing of hime. If the trank and barger branches are covered with loose seales; of old bark upon which lichens and mosses leave a foot-hold, scrape off the loose bark, using a blunt, short-handled hoe as a scraper. Then in a damp time or thaw wash the trees with soft soup, made thin enough to apply with a brush. Use home-made soft soap, made with lye or potash. That sold at the stores is usually merely hard soap mixed with water and very deficient in strength and quite inferior to the home-made. Mry the soap with enough water to work readily, go over the scraped portions with it, and leave the spring run to finish the work. In due time the bark will by found beau'ifully smooth and deprived of all for ign growth. The scap that has been washed into the soil will act as a useful fertilizer. Long neglected trees usually require pruning, and this must depend on the condition of the tree. Never cut out a branch without good reason for it. If the top has become crowdell, cut out enough branches to let light and air into the center, if grown one side, remove the branches meded to restore the falance. If large wounds are made, smooth the surface and paint them over

THE GRAPE VINE.

A Writer Treats of its Cultivation in the Instern Districts.

The culture of the vine is an ancicut and honorable occupation. Whether it antedates the flood, we know not, but one of the first recorded occupations of Nouh after emerging from the ark was planting a vineyard. We also read that he made wine and was drunken, but we do not read of a repetition of this folly, and, judging from the ripe old age he attained, we infer that he reformed. Grape growing is carried on more extensively in the countries beyond the sea, than in our own land. Both sacred and profane history abound in allusions to the vine and its products. It is everywhere regarded as a symbol of prosperity. Grapes are one of the chief sources of wealth in many of the European countries. France has over 14,000,000 acres in grapes, and planted in 1887 over 182,000 acres of American viues, besides vines of her own growing. Grapes were introduced there in the third century, and have for hundreds of years formed the chief source of revenue of the government. Spain, Portugal, Greece, Italy, Germany and many other of the European countries, produce vast quantities of grapes.

Grape growing for market began in this part of the State, if not in this country, a little more than a third of a century ago. A gentleman residing on the shores of what was then Crooked Lake-now Lake Kenka -appreciating the value and heathfulness of grapes as an article of food, planted a small vineyard for family use. They grew and thrived so well in this location, that he had more than his family could cousume, and, being a man of ideas, he conceived the project of shipping his surplus to the city market. Carefully packing a barrel of grapes in shavings, he sent them to New York. They arrived in due time, were sold at a good price, and the proceeds remitted to our adventurous shipper. The dollars he received produced an itching for more, and he straightway packed and shipped another harrel. This glutted the market, and he received word to send no more, Thus, in this small way, began an industry that has grown to immeuse proportious; that occupies thousands of acres of land in our own state, employs thousands of persous, loads whole trains of cars and brings a revenue to the producers of hundreds of thousands of dollars annually,

The area of successful grape growing in this State has been restricted heretofore to the immediate neighborhood of the small lakes in central and western New York and to the valley of the lower Hudson. With the introduction of hardier varieties, the limits are being gradually extended, so that grapes are now profitably grown for market, where only a few years ago a supply for the family was the exception and not the rule.

Grapes are so easy of culture that every one owning a foot of land should plant them. They require a warm, dry soil, not too rich, to grow in perfection, but will grow almost anywhere. The south side of a building where the vine may be trained on the wall, is an excellent place. In a western city, a jeweler showed me his grapery. In a yard back of his store, containing but a few square feet, and surrounded by high brick walls, he had planted a few vines, and trained them upon the walls, In this limited space he grew more grapes, I will venture to say, than half of the farmera in the country.

Select a well-drained, warm piece of land, having a snnny exposure. Dig a hole large and deep enough to spread the roots out well, and put the vine well into the ground. If you have any old bones handy, dead poultry, cats, dogs, (best use for dogs ever discovered,), or anything of the kind, bury it where the vines can feed upon it, and you will be surprised to see them grow. Cut the top back to three or four buds when planting. Drive a stake a few feet high by each vine, rub off all the buds that start, but the strongest, and tie this shoot to the stake. If you plant any great number of vines, the work of planting may be expedited by using a team and plow to help do the digging. Plant strong growing kinds like the Worden and Niagara, teu feet apart, in rows ten feet apart. Weak growers, like the Delaware, may be planted as close as six feet each way.

What varieties to plant? This question is about as delicate a one to decide, as that of awarding the prize at a baby show. The variety that succeeds on my farm may not on the farm across the way. What suits my taste may not suit my neighbor. There are some old varieties that succeed almost anywhere, and the beginner is generally safe in starting with these. Don't be in too much of a hurry to plant every new kind advertised. Among the blacks, the Worden, Moore's Early and Concord; among reds, the Agawam, Vergennes and Delaware are good varieties and succeed almost anywhere where grapes will grow. As yet we have no will tested white grapes that succeed over the same territory as the blacks, although several new kinds have promised us all that is desirable in that direction. We have not, as yet, fruited the most recent introductions, but as several of the comparatively new kinds fruited with us for the first time the past season, a few notes in regard to their behavior, may not prove uninteresting. Readers will please bear in mind, however, that the past season was one of the most unfavorable for grapes that we have had for a tong time. They ripened very slowly and were of very poor quality.

We had always considered Moore's Early our earliest grape, but this year we were agreeably surprised to find one of our newr kinds, the Telegraph, ripening several days earlier. It is a black grape; berries small, about the size of the Delaware and looks much like it, excepting the color. Very compact clusters and of good quality. From a single season's fruiting, we should say it is a good grape to plant for early, at I ast for family use.

Moore's Early came next, ripening about three weeks before Concord (which didn't ripen fally with us this year). This is a hardy strong-growing vine, and is productive of somewhat straggling clusters, of very large, black berries, of good quality. Should be largely planted.

Brighton is one of the best, if not the best, red grape grown. The vine is somewhat tender, and needs protection. It is moderately productive of fine clusters of light-red grapes of the best quality. It will pay to plant this for family use, though some extra pains have to be taken with it to carry it through the winter.

Worden scored another triumph the past season. Hardy in vine, it ripened its crop of fruit fully, while the Concord failed. It is larger in herry than Concord, earlier and fit to eat as acon as black. I does not, however, hold its flavor long after ripening, but needs to be picked and marketed as

its way steadily to the front, solely on its grately augmented, and prices will hold.

Agawam (Roger's 15) is a good red grape, and a long keeper, though somewhat shy bearer. A very thick skinned grape, and grows rather straggling clusters.

The Vergennes, a red grape, ripcuing about the same time as Agawam, is of nuch better quality, somewhat similar appearance, and much more productive. I think this will prove a most excellent sort to grow for market, as it is a long keeper, hardy, and very productive.

Woodruff Red fruited with me for the first time. It is a very strong, rampant grower, and enormously productive, but if I were nuder oath I should hardly call it fit to eat. Some like it and call it good, but it is foxy. As it is so very hardy it might be an excellent grape to raise where better varieties cannot be grown, as it is better than none at all,

The Eum-tan is a good black grape with very long clusters and medium sized berries. Ripens about with Concord.

Jefferson is a very late red grape which utterly failed to ripen, but which showed such sweetness and delicacy of flavor in the partially colored berries as proved it to be a most excellent grape for a longer

The earlier ripening sorts I have indicated cannot tail to please those whose seasons are equally as long as ours, while the latter ones will do to plant where a longer period of ripening is possible,-Cor. Orange County Farmer.

THE OLIVE.

It is a little marvelous, remarks the Colusa Sun, that such a race as that ocenpying this Pacific coast for nearly forty years is just beginning to wake to the value of their home. There is, perhaps, not a spot on earth so wonderfully blessed with everything that makes life a success. Our winters are almost like spring, and our summers are never tora and terrified with storms and cyclones, while we have every variety of soil, from the red, rocky clay of the mountain side to the deep, rich, loamy valley lands of indefinite depth. We have for many years been growing wheat from the Sierras to the sea, and it is only within a few years that we have discovered our true wealth in the fruit producing capacity of California but our attention has not been sufficiently directed to the olive. It is one of our most important products. If a man had a few acres in bearing olive trees, he might fold his hands and live at his ease. It is one of our most hardy, our most prolific trees, while it is almost as certain of a crop as that the seasons come. And herein lies one of its advantages. We can count with unercing certainly on something of a crop every year, and almost always a full crop; while the market is as unfailing as the crop, and we see no reason why the prices should not always be remunerative.

Pare olive oil is now worth \$12 per gallou, and the demand is much greater than the supply; and this, too, when it is used chiefly as a medicine. From time immemorial both the oil and the fruit of the olive have been used as an article of food. There is nothing more healthful and palatable when once the taste has been acquired, and it is a taste that can be easily acquired. soon as ripe. The Worden has never been When our people learn to use the oil and \$12,000, and liabilities \$7,000.

inordinately puffed, but has been winning | fruit as food the demand for it will be

It is among our most long-lived trees. There are olive trees now standing and vielding fruit in abundance that are from 1000 to 2000 years. It is said that the trees on Mount Olivert to-day are the same under whose cool shade the Son of God walked while on earth. As they are long lived, so are they slow in coming to maturity, or even to the point where they bear sufficient fruit to remunerate the owner; and this is one reason why fast-moving Californians are so slow to plant the olive. They want something that will begin to pay at once. To wait ten years on a tree is more theo they can stand. And yet, many of these same Californians have owned red bills that can scarcely produce enough to pastare two sheep to the acre, that had they been s t out in elive trees years ago, would be worth more than their richest lands The olive will grow in almost any soil.

But one to plant an olive orchard need not wait for ten years. Either plant your trees in the midst of your vineyard, or plant a vineyard in the midst of your nlive orchard, and you can live off the fruit of the viues until the olive begins to bear. The vives can be removed gradually as the trees grow. There is no more beautiful tree for shade and ornamental purposes than the olive. How much better it would be to plant them in the yard, letting them take the place of the eucalyptus, Monterey cypress, the locust and other such trees.

The profits of a crop, when the trees are in full bearing, are in the neighborhood of \$1000 per acre, and this is said to be a low estimate. Another important fact in regard to the olive is the time of the harvest.

This extends from about the first of December to the last of January, giving ample time to gather the entire crop without a waste, as well as coming at a time whon no other fruit demands attention. There is uo waste. All the green fruit when beaten the tree can be thrown into a pickle, while the ripe can be thrown juto the vat for oil,

With these facts gathered at random we trust many of our fruit growers and farmers will turn their attention to this heretofore ucglected fruit.

POLISHING REDWOOD.

The following is recommended by a San Francisco man as the result of a long experience:

One quart turpentine, one pound corn starch, one-fourth pound burnt sieuna, one tablespoonful raw linseed oil, one tables spoonful brown Japan; mix and apply with brush, Lethit stand fifteen minutes and wipe off with a soft rag, then allow to dry one or two days. Then two coats white shellac and rub down with fine flint paper, Then two to five coats best polishing var. nish. When well dried rub down with pumice stone and water, and stand another day to dry. Then wash clean with chamois, rub down with water and rotten stone. wash and dry, and then rub with olive oil till dry. A smooth cork block or block of hard wood is good to rub down with.

Many au iugenions persou makes little articles of redwood and hardly knows how to finish in the best style.

HENRY B. WAGONER, a prominent vinevardist and wine maker, has assigned to to the Farmers' Union of Livermore for tha heuefit of his creditors. His assets are

TREADMENT OF BLACK BOT

correspond ats Norman J. C. Iman, Commissioner of Arresptur, has issued the following mreatur-

The experiments read in 1888 have den onstrated by reliquistion that the copper compounds especially the Bordowix unixture, can be relied up as to gr v nt black rot. When the remedia were properly. applied from on to 7 tp r cent, of the croy was savid

Down woof these facts the preparations which formshid the best results in less are here given with the urgerite questillaten er more of them be thereughly test defar ing the coming seasons.

1 SIMPLE SCIUTION OF SCHERNIE OF 01.PFB

Í Tussile. I plant of par sulphit e pperu 25 gabinel vate. Who the proportion has, marninher of cases, but used with but find position its out of in lit especially when the long as your and tember, campathe advised. For spray ing the vin same long have ver, before the play's appear, it will distant prove a officier as is any fith to having mayanes and is more easily proper land appet 1.

2 BOUDLANCE MIXIME.

- la Dissolve I'll stads of single to e-prer in 22 colons of water, in the navess I stake 30 pounds of time in 6 gade to of water. When the latt r maxime has cooled I sur it slowly into the capper salution, taking care to mix the fluids in roughly by constant stirring.
- (b) Passage o points of sulphate of copper in 16 gailons of water, and stake 4 pounds of tresh line in 6 gillons of water When cool, mix the solution as described above

This formula requires toesh hime. Air slaked lime, or a past- made by allowing freshly slaked due to setter, contacts a large percentage of water, consequently, if they should be combined in the proportions indicated, there would not be sufficient time to decompose the e-pper. Experience has shown that while 4 or even 3 peands of pounds of copper sulphit, it requires double that quantity of air sick d lime and three times the amount of paste.

The manuer of preparing the Bord-aux mixture may be in hifed in various ways, Colon I Pears n pulverizes the sulphate of coppor, and then dissolves it in from 2 to 4 gallons of het war. The line is then slaked in the same way that masons slake it for mortar. This is strained into a box left to settle and thicken, and then comband with the experied his wat rite the required amount.

13) KOLUTION OF AMM INDIAL CALEDNATE OF COUNTED.

Into a v see, having a capitaly of about 1 gallon, pour lopart of ammonia estroigto 222 Baums , add 3 onness of carbonatof copper, stir rapidly for a meanent, and the curbonate of copper wid dissoire in the use, dilute to 22 gallores. So far as we know, this preparation has not been used in this country as a reme ly against blackrot. As a preventive of mildew, however, it has given satisfaction. It is easily propared and apple I, and others namely to wine made here is the natural junes. the foliage.

copper in 2 gallons of hot water when for their huncls.

m tely sooked, and the water has oled, add 11, justs of commercial annua-In view of areas ring the queries of many and strength 225 Baume , when ready to use dilute to 22 g dlons.

> oper in 2 gallons of hat water, in another and besoily 21, pounds of curbonate of so to max the two solutions, and when all chirds with which I am expected bigettens perceitages the Got was on chemical reaction has ceased add 11, puts d amm and, then dilute to 22 g doms.

TREATMENT.

To indicate a definite line of the ement that will be applicable to all regions is in what liff alt. As a first step, however, very production should be taken to remove is in which the infectious material as I is sible. With this old it in sow the old as a and rotten bernes should be care placy concered in the fellor winter and un d'or fent d. The trimme ge should also be burned as they often Larbor thous and so or an animal sports or reproductive

It spring our the vineyard has been rundara put in order by the plow, but or and attended starts, spray the vines nor ongley with the Bord-aux mixture. amalast, or with the simple solution of and hat it e pper. The object of this praying as to history any spores of the angus that may be hidden away in the review of the bark. I bout ten days before be flowers up in spray all the green parts dothe vine with the Bord aux mixture. formula b, taking car to wet the feliage the roughly.

Spray again wat, the same preparation when the flowers are opening, repeating the profibucivity three works unto the fruit strongly mrg d; it is absolutely to cossary to menre enecess.

pumps especially constructed nozzl sith tike an min use quantity of major t which is carried in the back, knapsack load and a good many of them from some of vines per day, and the cost of treating fresh time is sufficient to dicompose 6. Bord aux mixture as indicated above, need given the usual deliars to git the stabi not exceed \$12.

NEVADA COUNTY WINERY

The Nevada County Winery Association was organized just before the ripening of grapes last fall and had but little time to make pr parations for making wine last s as in. The company leas d the Blisauf browery buildings, however, and proceeded to business. They made about 6900 gallogs of Zinfan bit wine and 500 gillons of Muscatel. The wine is now only three mouths old, but it is declared by all who have tested at to be a very superior article. is a sweet wine, and in the vall . With sections it is fortified with brandy, but the

This winery will some day be famous for its production. The exhibitors at the State Dissoire I pound of sulphate of Tair next year will be compelled to look out ungathered, that seas in fir 5500. They

REPPING TO AN ORCHARD

T H H sken writing in 1 : 10 M says. A very large orchard reger scalar h. Dissolve 2 points of sulphate of capital to run it. One night think this this would upo with our signing " his it has its not not dways. One of the long store in a thickwise top of the typical The trees some five thousand trees, thousand who there is developed where the branch's happed cond on naturally good land, adjust to the new the fire which a man root, the best standard varieties at in tackly were seed his not yet north part for its if. The first of the control of the properties. havy margin ras a director sporting. But to bring met and noverein. The lated quewhich it is planted had been formed in the (1) goes below the going been still 1 almory way for many years before the engineering of the very season in my own was his splant d had be in farm it in the trees were set. At material was returned all A the Fig. is family in spotendition, as moving yielding three for this agree response so a significant with R. L. sett tres, and satsoprintly kiption of plan, and expect or fact withinty, that rops, with on ugh mature to keep the interplan of a cross Clara fruit, but burning size, and then, diers with yours offer disability is such sport and all the ar with and make applies, to a Same their fair Famous or a consider mich land and that pretty soon, or at booking do by he yould hope,

which he wrote in Wills a I Tolls is a use in point, fairly illustrating the situebegins to color. The necessity for bigin inon. It was considered a fatour until he bing the treatment early cannot but to plowed and manufed it, and then it prefuced big crops of such big from that, if I am not mi-taken, has than one hundred of For applying the remedies, spraying the applies filled a barrel. But it is some with the improved Vermore I nozzle, answers like that, or anything hear it. In truth, the purpose admirably. With this machine, the manure can by brought by the schooner fashion, a man can spray from 5 to 6 acres Large city to the lake shore upon which this crehard stands. At the ordinary price, I an acre in an average season, using the estimate that it would distinct less than manure into the soil of that orchard, which it would require to make it profitably produstive. The same effect might possibly be produced for some less money by using. in place of manure, ground raw the and Canada ashes. After one good crop has been produced in this way, this orchard could probably be made to keep its it up. and pay a moderate profit on the whole mevistment. But first there must be this heavy investment of new capito, the n cossity of which ought to have been tore,

As with a gard n, so with an orch or l A good many Frenchmen who are familiar I have never yet seen one to each for with the test vintages of their native profit. I have never seen on an awhich the country declare the quality to be equal to just leads of manure did not pay the most the last French wines, and unless it was profit. The most print do orchard of the labeled as a Ca iforma production the best. William's Favorite apple in the vicinity of) ide w would be unable to detect the dits Boston is kept " rich as a barnyard. " The ammount, forming a very chear liquid. For home the age, of course, has not been fruit is double what might be called the reached to perfet these wines, but they normal size of the variety, every apple is show what the footbill climate and soil is handled like an egg, and is git into the capable of in their production. The Musc at 1 market just at its point of perfection. This orchard is very profitable, the ich states The only orchard to rivid, this, that I have were, is in the city of Montroll, where I waw, some soven years ago, tharty-six to of Earn-ose, the front of which was all were very large and perfectly he dithy trees | in leasts all 19 81 per other

which lad, a right a lyes, it it an acre frich ed. It is woo be own that the I am use is an appoint very Latin to fungoid sporting. I sport sometime in examining the front prints of a collaborately Liden a but was much a find a single specistable to be true ake reported

come tour d'hay per ners. It was placed, as made as a construction of the tree this tries growing fairly with. Nothing so not high indicates of specific countries in the bowning with it into the tries right and this tries as which is a constant it became explicit that there was not weshingways or afterly. I have noticed strength on unless the facilities keep up about Montre, they is hards if large and it has a sort of large dividing," to asset the Those are the face years still a re-so much words of a neighbor, that don't problem climated will be so the problem. But anything hardly to Other orchards from a special Farm is soon to be within a great Francis, But tenth the number of trees, and note long many a harders the island of Montreal. are actually giving larger and but it is post. I susplit that it will turn out, on thor-Now, what is the matter? Plancay this ers ough my stight in the there is one other durid wants manage, and a good deal of it for rin regards, the school of spotting manufaction in year our it, unless the treatised is pure south of hoothy. Now, Mr. Harns' Northern Spy exchard, of with in the Face is not put from and In that said is the construction and it. Milit al. Billis a harbor trathat Fan. 150; but with 1 55 harly flower tods, so that it los not bear so heavily. This being - I dealer if I can entirely stip the Fam use for splitting here by high end in I it. wa that the fungus which ours a spring to as the burns also, its to cossary. The Euroka sprayer, fitted bring up this one hundred acre orcher) in the rhaps triming. But it is mis to me Ularaphyi is more dundant on my the cases are larker and more who is suspension of the leaf more vizer is in the sistent, an apple fruit is simply five and so filed to 2 ther, united at the descard the Lopen the inside with course to-sure may not the out resuri. ad al. fritt-in skin partike of this similarly and resistancy of Lorimot add Q E D let it a ker isomalis, don't it? It follows the suther are upper orelated to to keep that thy and a ninu castly productive, must have the fertility if its soil maintimed by righted applications of such man it so is the tree - 1 mind, and if it is a printable or mark to the not sawy expense with the relation process of the crop.

TO RAISE OPILM

In Sa Ben at . x problems the Charles the wa ton yours he has spont in this State, has spot most of ms too in the poppy distrats of Chira, is and avoid 2 to produce a form upon whole to resolve pass. Ho says that mash removed over an Unita-are ther to be found such adaptations for the entir of the paper is a Social mardino anty. He explains in manner of its otir ist. Ws

The selession peters and traying and selections part in reason to plant over the above the plant of the selection of the sele A feet that the transfer from the feet to the transfer from the transfer from the feet the transfer from the feet to the feet



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AGENTS

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FRIDAY..... FEBRUARY 15, 1889

A WELL-KNOWN mining man of Nevada, in easting about for a sunny spot to pashis declining years under the shadow of his own vine and fig tree, finally selected Anhurn where his eyes might be gladdened by an occasional glimpse of the snowcapped boundaries of his old time habitation. After purchasing land (Nevada men always pay for everything) to set out the desired vineyard was the next object in life. The ground was prepared, and class of grapes decided upou, when in an uulucky moment he happened to pick up a paper containing an essay on California bugs and their devastating ravages on vines and fruit trees. His hopes were shattered and his health began to fail. He returned to business in connection with the Comstock mine which he controlled, and worked assidnonsly to banish unpleasant memories. It is difficult to say how his case would have resulted had he not in showing the fatal clipping to a friend, accidentally discovered that it was taken from a Nevada

The vines are now being set out on the Auburn rauch by the thousand, All of them cuttings from the leading vineyards of California, and the only regret of the honest miner is over the time lost through not discovering the source of the annoying paragraph before giving credence to its misleading statements. His cellar will ultimately provide a special brand of wine, manufactured especially for free distribution among the Nevada newspaper fraternity looking towards their total extermination at an early date.

A CORRESPONDENT of the Santa Clara Valley estimates the total expense of cultivating an acre of grapes is \$15; the curing and packing of an acre of grapes, making 100 boxes of raisius \$55. The average price for raisius for the last four years has been about \$1.60 per box. Putting the price at \$1.50 per box for the four grades, we have a total net profit of \$95 per acre. Many vineyards do better than the above. Vine yards have frequently been known to produce grapes enough the first year after planting to pay expenses of cultivation. The second year brings from \$30 to \$50 per acre gross; third year \$60 to \$75.

THE PEOPLE of Nevada are busily engaged planting out orchards and vineyards whose hospitality they enjoy. and hundreds of acres will be set out this season in Owens valley district alone. The trees and vines have so far been obtained from California nurseries, a fact which has apparently aroused the ire of some of our contemporaries on the Eastern side of the Sierras, who as a rule are more at home on the subject of dip spurs and angles of a quartz vein. Tall stories always go in Ne vada, and the following excerpt from a leading journal tends to show the menda. ceous absordities, evolved in a spirit of simulation: "People on this side of the mountains should have nothing to do with trees or vines from the west side. They should establish nurseries of their own There are in Western California a thousand varieties of bugs and tree and vine diseases. No inspection can detect many of the diseases. To show the contagious nature of some of these diseases we may mention that it has been thoroughly established in Eugland that the disease of timber known as dry rot is communicated to some timber through chisels and other tools that had been used in working infeeted timber "

It is difficult for any one acquainted with the conditions of life on the sage brush deserts to realize a cause for complaint in the liberality of our nurserymen. Bugs have always been a staple commodity with the larger portion of the inhabitants, who will assimilate more readily with an extra supply and buy juice galore, than with a superfinous product of fruit and wine. Let us hear no further disagreeable allusions to the California hug or the supply may be curtailed by an advance in prices on the same principle as charging for chicken-the gentleman who grumbled over his half-hatched egg,

BONFORT'S Circular says: Among the wine trade at Oporto there has of late been considerable excitement, culminating in a strike of fall the men employed in the manipulation and export of wines, and leading to some excesses, so much so that the military had to be held in readmess in the barracks to suppress disorder if used be-The cause of the trouble has been the creation of the Real Companhia do de Portugal, The latter, at the justigation of Viscount Villar d'Allan, has recently been formed with a capital of 7,000,000 francs, and engages to pay fines to the amount of \$25,000 American gold if the Government can prove that any of the wines it may export are in the least adulterated. The Government has accepted the proposition, and will appoint inspectors who are to examine the casks and bottles to be shipped, stamping thereou the official export brand. This the numerous English export firms look upon as a Government monopoly in disguise, and by way of retaliation engineered the strike. But there is a counter movement on the part of Portuguese dealers and exporters who approve of the measure of energetically stopping adulteration of Portuguese wines intended for export. The Governmeut, at the same time, in answer to the demonstration made by Euglish firms, declared its readiness to extend the control to the wines of the associated English exporting firms. The matter has been in abeyance since, and it remains to be seen whether the compromise will be accepted. The British consul at Oporto disapproves that he cannot promise them protection if | year aggregated 21,047.

they disturb the peace of a friendly nation

The exhibition at Berlin of Portugues wines got up at considerable expense, does not seem to have projuced quite the result anticipated.

ENGLISH TRADE journals, note in contrast with the many deficulities France has at present to contend with, a marked improvement in her wine industry after many years of loss and destruction, occasioned by too prolific phyloxera, the pest seems to have been almost, if not entirely, stamped out. The locusts which plugued the Egyptians seem to have conferred many of their devastating powers upon the wine-louse. From the year 1865, when the creatures was found among the vines of Avigaon, the Freuch cultivators of the grape have been waging war with their multitudinous enemy. As last they have got him under. The vastatrix is vanquished, and once again the wine production of France is attaining something like its old level. The experience gained in the extermination of the pest ought to be of good service should the wine-louse appear in other countries. It would be foolish to suppose that the species is extinct; and its capacity for mu tiplying, under favorable conditions, is simply phenomenal. It is estimated that one of the species can bring into b mg some 25,000,-000, descendants in the period of six mouths and even then the reproductive power is not exhausted. If, as we believe, this estimate is within bounds, who can be surprised that in one year about 500,000 hectares of vine-growing land were rendered valueless?

A VIGNELON in Pomona, who was born and raised in France, claims to have recognized in the mysterious vine disease now raging in some vineyards in the southern portion of the State as the Mahlnew which once divested the vines in Italy. He also suggests a remedy, which is nothing more than the remedy used for years in this State for eradicating perouospora and other leaf as well as most varieties of fungus diseases. It is a wash composed of two pounds of lime, one pound of blue stone, mixed with sixty gallons of water. If this remedy is effective for the new plague, it will be fortunate, but in view of the scientific tests already made by Professor Dowlen, it is doubtful whether the secret has yet been discovered. Many causes have been ascribed as the source of the plague from presence of pepper trees to excessive irrigation. The most correct of any theory yet assigned seems to be that which suggests the presence of fungoids in the cellular tissue of the wood. Experiments are now being made with some vines in hot-houses at Los Angeles, which will doubtless throw more light on this important subject. As it stands to-day it is impossible to believe that a solution has been arrived at in the use of the time-worn remedy suggested.

BONFORT'S Wine and Spirit Circular in a recent issue observes that Messrs. Kohler & Frohling have just reasons for pride in the enormous quantity of wine that they have handled during the year. Their receipts foot up over half a million gallons, or to be exact, 542,930 gallons. This is au increase over 1887 of some 40,000 galthe action of his countrymen, and declares lous. Of brandy their receipts during the

THE VINE DISEASE.

Belief Thal an Effective Remedy thas at Last Been Discovered.

The Pomona Progress published a review of the experiments and labors that Grat Mirande, a widely known grape-grower in this locality, has been doing during tha past two years in fluding a cure for the strange disease of wine and raisin vines that has ruined hundreds of acres of vineyards in Southern and Central California, and is now spreading more rapidly than ever. The Progress also publishes interviews with Mirande and the largest vineyardists in this part of Los Angeles county, and all agree that Miraude has certainly found a cure for the vine disease.

Mr. Mirande was a wine-grower in Southern France for years, and all his relatives and ancestors there have been engaged in the business for over 130 years From his relatives in France he learned that the same disease had ravaged thousands of acres of vineyards there until a preparation consisting of two pounds of bluestone, three pounds of slaked lime and tifty gallons of water was used. That eured the dis ase. Mr. Miraude has been quietly experimenting on diseased vines in this locality and he now announces that by a system of spraying viaes with this preparation with stronger or weaker parts as suited the senson and the stage of the disease he has cured thousands of vines. In several vineyards vines which were fast dying a year ago are now healthier than at any time in five years.

He makes no secret of his cure, and scores of vineyardists come to his place daily to see what he has done. Some of the cures he has effected in vineyards here are wonderfully successful, and so much confidence is put in the new-found cure that many people who had resolved not to attempt any more wine or raisin growing are about to plant new vineyards. Several vineyardists have come to Pomona from Fresuo and Bakersfield to see for themselves how well Mirande's cure has operated, and how the preparation is mixed and sprayed upon the vines. Every one here believes that an effectual cure has at last been found.

L. J. Rose, of Los Augeles, has lately received a consignment of twenty-five skylarks from Europe, which he ordered five years ago. His agent has the greatest difficulty in securing the hirds, which are said to be the only specimens in America. The birds are supposed to be the natural enemy of the scale bug. They will he let loose at once, except a few pairs which will be kept for breeding purposes.

THE LABOREST horse farm in the world to said to be thirteen miles from Cheyenne, Wy Ter. It includes 120,000 acres, and requires 100 miles of wire-fencing to keep the animals in bounds, with sixty-five men to look after them. The horses, young to look after them. I and old, number 5,000.

The Santa Clara Valley says: Mr. Geo. W. Ousley of the Willows uses the sulphida of potassium wash to kill the Brown Scala that infests apricot and prune trees. He

prepares it thus: One pound sulphide of potassium, two pounds whale oil soap and sixteen gallona water. Heat the soap in the water till it dissolves; then place the sulphide iuto a perforated can, and suspend near the aurface of the soap and water just so as to face of the soap and water, cover it and it will soon dissolve. It will soon the state of applied warm, The St. spray better if applied warm, Louis sulphide seems to be clean and good, while the imported article is reported as being dirty.

CALIFORNIA WINES

Many Win High Exteem at the State Capital

In response to an invitate in if the President of the State Vita altural Commission Charles A. Wetmere, extended especially to the members of the Ways and Means Commattee of the Assembly, a mosting was hill last Wednesday evening in the large private dining-room of the B staurant de France at Sacramento, which proved an egresal. demonstration of the high attainment of viticultural enterpris in Ca forms The object of the mosting was to show in a practical manuer the great results that are being achieved in exterimental vintages of the highest grades und rithe direction of the State Commission and in about a year has cuss the importance of continuing the support of this institute in with ample aper priations.

Among the vin-growers provent were C/AWetmore, of Livermore valley, President of the Commission: John L. Burd, of Tivington, member of the Pearl of Rights of the State University, and H. M. L. H.: whose vineyards in I is and National counties. Of the Ways and Most stocker mattee there were present Assemblymen Shaunahan, of Shisti, and Combsof Napa. The other wats at the table werfilled by Attorney General Johnson, Sort tary of State Handricks, Stat. Controll : Dunn, State Treasurer Herold, representatives of the press and others.

The dinner was served in an elector has a ner, and full epportunity was given to show toat with care and intelligence this State can, if the eff rts of the C ministration arfully seconded by private ent roris on larger scale than has heretofere been tried in the past, furnish not only a great abundance of the ordinary wholesale table wines but also the rare wines, such as the celebrated Rhenish, Sauterne, Bordeaux, Borgundles, Champagnes and Cognacs, prized by epicares everywhere. For soveral years the State Commission has been prefucing, collecting and preserving from grafted vines of the highest European types, small experimental vintages, which are new mostly ready for the bottle and fit for the critical examination of contoussours collection from these samples of the Stathas already been forwarded to be exhibit- i by the Agricultural Department at Washington at the Paris Expesition, and anoth r will be ready to go in charge of the State Commissioners. It is confidently expected that these exhibits will attract much attention in Paris and be the means of bringing large accessions of capital, now much needed in developing our trade and in further improving our vineyards.

Although it has been conceded that Califormia is a successful producer of ordinary sound stocks of merchantable wines, critical merchants and connoisseurs have persisted in beloving that we could now r equal the high-r grades of wines which command high prices and a world's market. The State Commission proposes to dispel all skeptical opinions of the wort, and to place California as the peer, if het the superior, among all wine-producing countries. Although the samples how ready in the Commissioner's cedar are vet rather young and have not had time to divelop in bottle all these characteristic qualities, yet the showing male was sufficient the Commissioner has shown to be possible, their products, by extending commercial be in their favor their. This is only con- 113,000 tens

has deale been days. How results and quite considerable areas of vin yards are being devoted by pally to the production Att for standing stoody vintages

The much the agency of the Permanent fallow, a wop a land and land see the first so a stoke I the choic stig dear to programme to the public, and their species is providely the digly attendance est festado as montrel San Francisof which is loss little tirstser stairet ar up accondition that only sed. It practical value of this work is while soils the frequent visits of Eastrun, runds who have here fore despited ar ar at pleast little.

 $K(\mathcal{C}_{\mathbb{C}}(F))$, thus such tracken for the Com ar is in East in cities the rethe fishing or san theforhis varieties, and to look flown in popul et projent som favor of finight brands. morphisms present to have for ed which by from our wholesaled alproduces to pose them before the public ablication des Assenasiastash and a track our best goods and r Carrmadables, or prolifers will participat. in the great prints of the retain r. This mission has been so much noticed and com isod by the Eastern priss, and Miss To I has been a ver by discussed, that bundreds it the sands of people who never

satable at fastale as tables, are new reaving their first impressions, and are being ax its 1 by care sity to in pair if it Calisfring de

know mything of Carfornia win s is pre-

when there are grave fears of ever-production and a us quent depreciation of land values through the State. Our vincyears as in weapall of producing in a favorable year, at least 300 20,000 gallans f with but it were have been much discouraged by box process and the aimest msurm until a distance of popular projedice which restricts their markets and makes their helps interpression profitable. The a manassion roceivoth corlid support of at a ast I's and people of the with hir city count to limit one way or in ther with the industry, and who arstrice ing not ally forth ir own axistance. but also to surich the owners of many missions of a resert hand which will fall in value if it shou. I be proved that the industry is financiany a failure and not to be extoub hover are stor areas.

Mr. Wethers explained informally much fithe working and purposes of the Comto n of vine-growers and the need of contimued bigislation to still further stimulate. the work of this industry.

approved February 20, 1885, which emarge Fresne, list fail sent off et al. lives in d the powers of the Commission, and Francisco and Kate Field's mission are create 1

Sommal The Board of State Viticals from there als tural Condition in resolutil, in addition to white I was in San Francisco and San Jose its duties already prescribed by law, adopt, and when I described the discose they wer such measures as may be within its power, able to recognize the discussions as existing in and in accordance with its best judgment, their midst, and that the result was more to advisor the skill and increas, the tooks discrimbe lestly or that may argue views meal knownedge of citizens of this State Now, while our viney it is are very ser, its'y while are engaged in vincilture and vinceuls affected, and without a remoty will winds ture, by previding practical instruction to worthless, I am not going to say that the to convince all, that the day of our promise I those requiring the same, a so, to assist discuss will surely ause the same destriccomplete success is not far distant. What producers in finding profitable markets for from at Fresno as here. The climate may vin yer I take season has amounted to

and popular knowledge fith - to the at the United States and Government of the insted becaments as I personal off turers of the said board and also there is define such bound on the result of the property of the general working to the property with the general working of the property of the Tradess relative wind may find the herritaning and disseminating in the to mean becomes in structure of the rational cost at 1 the languaof ferment I and a hard franks, as was also them, the list of the frequency ing dult-return and spin, as-

MORE ABOUT THE VINE DISEASE.

The following core - in linthe Los Angeles Heart supplementry t that will begge steel of the estimate of the

Elice Hemil In the sector besiter from Mr. B. bert M. Phorson, on this country speaks for itself. It is often i for pullar a tion is a justification of Mr. McPubrani's statement of the existing of the large have at Francisch and cast and as he formation to those poly is may only than to prate talk triving parts of have of all-abiding faith this ome out in leaf again we are manner nodies who havillar to tall via each off to and, possibly, says those was house not t

> The specifically years J. De Bauriesa.

P S List w & s - xan much hiel can-s sent to us from Sinti Cliric ounty, estabhas work, sanctions i by the State Gov. lished the fact that they und remainly hav runnent, is vastly important at this time the same is is thors, a fact which has on In y communicate it othe Commission J 1: 1: -

M PREE- N. January 1, 1888

Mr. J. D. Bar S. Davis Std -I have your favor of the dist, and not that you distri-1.1 1 -1 -1 -1 what I know of the vistence of the mysterous vine trouble in Freshold I who say in plain terms, I spent but the Tay and and the viney in least Fresh of it has been as made fithe time as I - uld. I be very contain ter of vineyerly and trought away sp in-in-that showel the in as as we have very plain'y. I not enty foul the but I also found on a that dropp d, the leaves and the cane semi-helds. ing green, as in the carry part of the soils This latter of him is a ryvineyards where the disease is well also vane. I. I am not alon in my pine a that the disease is in Fresho, for a party from Orange quite early in the see high seeing massi h, and spoke of the greater organization that country, made the statement to a m existed at Fresner Als Mr. Will Val. Dorin, a vineyarlist in this wile y. was for a number of y ar-The full wing is the section of the Act winner for man for Mr. Cass. Les. to his family, and thes way say r on for which the permanent exhibit in Singmed by a number in corvering and by so the leaves were considered affected by the sam disease as our own vines I mit sevire parte .

are I hap they may not be troubled tily toware. I am very sorry goe there feel so tender I only wish that some one that this livers, was about y are age. Hiping that you and our r n. Iv for as your troub.

> I smy ies viry truly, HOLERT M. PHERSON

WHOLESALL MARKET.

ar. I'r arge lote to the whole 1524 S.S. K.S.

Harry Carry at 2 Fight + 25, 50 and 75 cents a little of the pittan ellicitox prices.

n Las ra 1.40 a

74 8 1 40 x 1 50 trs - 2 25 x 2 45 50 Galla: 4 50c

3 2 31.

Sugar Quotations.

California Sugar R finery price list dated Library in three A. Pat Cube, 61,c Circle A Crished, \hat{e}_{i} , . Fine Crished, \hat{e}_{i}^{a} , \hat{e}_{i}^{c} Lxtri P abrid. C. Dry Granulated. II. Confectioners Carrie A. 65, c. Extra C. , . Gilla C. 47, Star Drips Syrap, in bills, 17%, . Lf lo, 20c, 5-gall kegs 25. : 1 gai tals, 35c per gallon.

Principal of the A. roan Sugar Befinery lated January 3 th Extra Fine Cabe, in bbls, 6 . . Cir le A. Crushell, 62.c. Fine Crish L. . . Powl r l. 60. : Extra Fine . Dry Granulatel, XX 6%c. Post-rel. 7 Dry Grandate I, 61. . Confectioners' Cir-. A. C. Extra C. T. . Golden C. 4",c, American Golden Syrup, in bbls, 20e per

GROW MORE FIGS

The Or vi Register, furnishes the folwing not react in relative to the culture th fig. " The tr . I ex well in any soil. la k ad do, r d clay, sandy loam, or even in all I figrive! That no insect pests trible fruit or tre. That will make the he after hit fruit to grow with many who have be see her aring lim fighting fruit There are no fi years and no light crups. The fig is is regular as the seasons in their carse, in layeur after year the tree is lead it with its lessions burden. There are many vari ties, one hundred and fifty it I ist, but Only a few kinds have as yet on test I in this State. They are rapid ar owers and the third year produce a paying In many instances a fair propean be thank I the world sommer California is han by State in the Union whore this fruit grows to perfection, and there is no fear of ver-pr Juction. There is a great difference in the hardine I of figs about frost. The What Adrests is the most tender of all. Best I s dry ng, the dg can be preserved in a variety of ways as a healthy and favorite It lears an enormous crop and conthere s to live and bear for a contury. But uttle irrigation is required to start the young tros, and no water is needed after the tr - ar- tw or three years old.

In your figraps of mothe National

KRUG CHARLES.
Krug Station, St. Helena, Napa Co., Cai Producer of fine Wines and Brandies.



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HENRY WAAS, Wood Turner.



Wooden Bungs, Taps, Plugs, etc., Oak Bungs, Soft and Hard Wine Plugs, Soft and Hard Tap Plugs, Wine Samplers, Bung Starters, etc.

720 MINNA ST., bet. Eighth and Ninth, S. F [Established Since 1856.

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A CHOICE LOT OF

RIPARIA CUTTINGS.

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CLIMAX SPRAY PUMPS.

Best and highest en lorsed Spray Pumps on sale, bequalled for durability, convenience, and ease of orking. Send for circulars and prices of different ion.

Pacific Cyclone Spray Tips, Climax Bamboo Extensions. MANUFACTURED ONLY BY

Cal. Fire Appara us M'f'g Company. 18 California Street, San Francisco. CUT THIS OUT.

FARM FOR SALE

Two handred acres in Sonoma County ten minutes drive from railroad station Forty acres planted in the finest variety of vines. The balance rich river bottom, and rolling land capable of the highest cultivation. Several never failing springs and plenty of oak and redwood timber on the property. Good house, large barn, and out haildings. Scenery, climate and roads unexcelled. Good fishing and hunting in the neighborhood all the year round. One of the most elegant and profitable suburban homes in Northern California.

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E. P. HEALD, Presidenti C. S. HALBY Secretary.

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FRESNO GROWN TAHITI ORANGE SEEDLINGS,

CABERNET FRANC, CABERNET SAUVIGNON, MATARO AND RIPARIA CARIGNANE, CUTINGS \$5 per Thousand GRAPE ROUTS AT REASONABLE RATES.

M. DENICKE, - - FRESNO, CAL.

Packed Figs for sale at Tillman & Bendel, Clay and Battery Sts., S. F.

The following is taken from a letter written to Mr. Denicke, by John Rock the wellknown nurseryman and horticulturist of San Jose:

M. Denicke, Fresno: DEAR SIR-The figs sent to me to San Jose are very fine, and nothing has yet been produced in California to come any way near them, * * Enclosed are orders for twelve additional cases. Very truly, JOHN ROCK,

San Jose, January 7, 1889.

FRUIT AND NUT TREES (Large Assortment),

CRAPE VINES --

RESISTANT GRALE VINE STOCK,

(Very Fine).

Ornamental Trees, Olive Trees, ORANGE TREES,

AND GENERAL NURSELY STACE.

All Unirrigated and Free from Disease. Tax

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Mexican Phosphate & Sulphur Co.

A Genuine Fertilizer for Vines. Trees, Cereals, &c.

This valuable manure has received the highest testimonials in Northern Europe, where it has been used for the past two years, and is now offered to the Pacific Coast Grower with perfect confidence in its

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CAN FRANCISCO SAVINGS UNION, 582 California street, corner Webb.

For the half year ending with 31st of December, 1888, a dividend has been declared at the rate of five (5) per cent per annum on term deposits, and four and one-sixth (4.1-6) per cent per annum on ordi nary deposits, free of taxes, payable on and after Wednesday, January 2, 1889.

LOVELL WHITE, Cashier,

The German Savings and Loan Society 526 Unlifornia Street.

DIVIDEND NOTICE.

For the half-year ending December 31, 1888, a dividend has been declared at the rate of five and one-tenth (5.1-10) per cent per annum on Term Deposits, and four at one-fourth (4\(\frac{1}{2}\)_1\) per cent per annum on Ordinary Deposits. Fayable on and after WEDNE-DAY, January 2, 1889

G. O. TOURNY, Secretary.



Open for Ladies and Gentlemen daily from 9.4 M. till 10.9. M. vimission 23 tts. Catalogue Free. Go an tlearn how to avoid disease and how wonderfully you are made. Consultation and treatment personally or by letter on weakness and all diseases of use. Private ffice, 211 Geary street. Send forbook.

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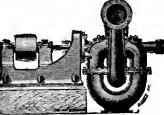
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ENGINES AND BOILERS A SPECIALTY.

ACENTS, Also, Gregory's Celebrated Spraying Pump for ordereds. The only one ever recommended by the State Horticultural Society

OUR NATIVE WINE SHIPMENTS BYSEA.

PER O. S. S. COS STEADER AUSTRALIA

MARKS,	*SN1911[#	FRENANCE AND	CONTENTS.	GALLONS	LALLE
3 W M & Co	Kehler & Van Berg 1	7 Larole Wins		350	521
***	Technical Control of the Control of	12 parkages Wine		4111	- 7
41		Sales a Hills		125	330
11		50 5125 1/111		506	38
Lev T fr	. J Panet .	of the same William		34	
J	A Harasethy & Co.	Thirth w With		342	100
	11 11 11 11 11 11	125 Kees Wine		625	Es.
41		32 hour Wine		3201	- 2
**		101 i can With		24	-:
ASACo .	C Seh Ping X C+	Lasks Witte		151	1
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	1.	D. A. K. William		365	127
G C	Distriction of these	I had barrel Wim-		271	1
5 S L	Hedgeside Vita val	ph barr - Witte		250	1
++		Trans Willer		1.5	
rer	Goldberg, Bowen & C	disases Wine			
H & Co	Kohler & Froblic 2	1066 Kras Wine		500	45
44	11	12 half asks Wine	****	61	;
4.0		2 can to Hall blanks		133	
18 N Co	S Faster & C	140 Charle Willen			
o mark		50 Kras Willey,		356	31
CC P	B Droyfas & 10	18 half barres Wito			
*1	4.	Girke s With		1,220	1.0
**		O or as Watter			
				-	

PER P M. S S, CO'S STEAMER SAN JOSE, FEB. 2, 1889.

TO NEW YORK.

A Pv	Chemoranna d 1 F 4 1001 arrels Wang	i those	81.579
Rev T M D	Lenormand 1 F 4 1000 arrels Wine I stree Wine	51	26
i. S	Dresel & Co . 25 tarrels Water 1	261	500
J B M	A Brun & Co . G barrels With	300	90
K & F		1,520	936
N C		it III, c	1,202
JS .,	Wolber Bros & Co I had Jornels Wine	1111	112
A V Co	C Schilling & Committee Of Journey William Committee of the	2,3867	530
D in d:amond	O barro - Wine 2	3.5	1,179
J.P.,	Trapob, Berges & Co. (16 bands Wings,	762	213
G	I Gira Pach & C 38 ps Witte		222%
BD&Co	If Dr. dos 5 barrels Wine	642	1,652
Tatal amount of Wine,	* esses and	5,4 (10)	85 121

TO CENTRAL AMERICA.

S R, Goxf mala Catton Bo J M D & Co, La fallertad Montead of J G B, Puntas Arenas Stockton M			
11	" 16 com s Wille	 151	172
Total amount of Wine, 7 cases and		 163	\$3.6

TO MEXICO.

J.P., Mazitian W. Loaiza 12 casks Wine	125	8.5
A H & Co, Acapulca Urrucia & Urmete [20] cases Wine		80
Total amount of Wine, 20 cases and	125	\$155

TO GERMANY

		-18	
H. H. Hatuburg, B Drevius & Co.	1 barrel Wine	 	8.35

MISCELLANEOUS SHIPMENTS.

DESTINATION.	\ E5~82.	K10	GALLONS,	VALUE,
Tahiti		Barkentine	700	
		SUABBT		
	J D Spreckels			
	Arabicati			
Honolulu	W. H. Dumorel	Errientine	2,500	
Chicago (via Vancouver .	W H 10mond,	Steamer	1,015	
Total			6,401	84,395
Total shipments by l'an Total Miscellaneous shi	ama steamers	12,56	S gallons	\$5,920 9,150
Grand totals		35.35	22	918 070

ANCIENT TABLE CISTORS

poet of the same name-says

"There the well-dressed guests recline On couches rich with ivory feet;

And on their purple cushions dine, Which rich Sardinian carpets meet And Ausvandrides

"Open the supper rooms, and sweep the house

And spread the couches fair,

couch with silver feet, with an accompany- fancy.

ing message saying: "I send you, O Timageras, the couch and coverlets and a ser-It was one of the ancient customs, says vant to arrange them, as this is a matter Table Talk, to recline at the feast; and the the Greeks know not of." It is related of banqueting rooms, gorgeously earpeted, this same Gretan that he had so completely were fitted up with luxurious couches, secured the favor of the Persian king, that Thus Plato- not the philosopher, but a the latter invited him to a banquet of the royal family, an honor never before paid to any Greek

Here is another custom of the Ancients, and one in which we can see the origin of our menu cards. Each guest, as soon as h had witted upon his couch, was handed a paper upon which was written the name of every article to be seen. of every article to be served at the feast and in the order in which it was to be served—a convenient, if not an indispensa-Heraclides says that the Persians were the first who engaged artistic experts especially to arrange these conchest that on one occasion Artaxerxes presented and that on one occasion Artaxerxes presented and the content of the custom, indiced, in the present day we would be apt to look upon the omission as both around the content of the custom, and each convenient, it not an indispensation of the custom, indiced, in the present day we would be apt to look upon the omission as both around the custom and the custom, and each convenient, it not an indispensation of the custom, and each convenient, it not an indispensation of the custom. sented his friend Timagoras, the Cretan, eacy, and thus allow him, in the dark, to with a tent of great size and beauty, and a dishes which he may tolerate rather than

Description of the Blueberry.

The Blueberry is a valuable fruit, and is a reliable fruit to grow in our northern States where the more tender varieties of fruits wintership. It is perfectly hardy having stood 40 degrees below zero without showing any many to the most tender buds. It upons in this latitud about the 1st of July, and is beine in clusters like currants; shape, reund; redship purple at first bath becomes a bluish black when fully uponot people delicious. It may be served with sizer and cream recooked sauce, and is sphendid for winter use. The plant seems to floatish in all soils, and is a profife bearer. It grows very stocky and makes a newhere he had to the first is great leaves and the blue from making a pleasing contract. The demand for the frait is great leaves and the blue from making a pleasing contract. The demand for the frait is great, and usually trings 15 cents per quant. They common to bearing the first year after setting out, and yields a full crept the second and third year after setting out. They are propagated from suckers and rest entings. The plant is alway to height and size of the currant bush, and very stocky, holding the fruit well up from the ground. That is should be set in the fall and spring in rows two or three test apart, and live or six feet between the the fall and spring, in rows two or three test upart, and five or six feet between the rows, making a perfect hedge, and no grosser weeds should be allowed to grow between

PRICE LIST

1 Dozen Plants by mail, 60 cents. 2 Dozen Plants by mail, \$1.00

| 100 Plants by Express, | \$2.50 | 1000 Plants by ex. or freight \$15.00

How to SEND MONEY. I would prefer to have money sent by American Express order, all sums of \$5.00 in ander, esteady 5 cents, and if order is lost, money will be promptly refunded to sender. If not convenient to chance express order, money can be sent by registered letter or jost elice money order or post all note, drawn on Portland, Mich. Postage stumps will not be necepted only from our customers that cannot obtain an express order—only these of one cent denomination wanted.

Plants are carefully packed in damp moss and delivered to express or freight office, for which I make ne extra charge. Address

DEI OS STAPLES, Portland, Ionia Co., Mich.

INCORPORATED 1884

160 ALRES

TREES AND PLANTS. CALIFORNIA NURSERY CO.,

NILES, ALAMEDA COUNTY, CAL.

LARGEST STOCK ON THE PACIFIC COAST.

Fruit Trees, Olives, Oranges and Lemons, Nut Trees, Wine and Table Grapes, Berry Plants, Shade Trees, Evergreens, Shrubs, Roses, Etc., Etc., Etc.

FOR COMPLETE LIST, SEND FOR DUR NEW CATALOGUE

JOHN ROCK, Manager

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Niles, Alameda County, Cal.

JOHNSON-LOCKE MERCANTILE COMPANY,

COMMISSION MERCHANTS.

SAN FRANCISCO.

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Royal Baking Powder,

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409 & 411 Montgomery Ave

40 & 42 Fourth Street.

401 Hayes Street.

SAN FRANCISCO, CAL.

ICED CHAMPAGNE.

Among Mr. Webber's mise-flan-ous remarks, he inverghs, says the Saturday Repiece, as do most authoritis novidays against the ones universal practice of leng champague. The cond-unation, thoughtjust in the main, suight to be made with a distinguo. To les dry champara, such les has long been fashioadd a is barburous enough, but it is by no me ins so e main that to ree sweet champegue is such an illtiding. On the contony, the rong tak well the sweetness to be ruinext at in briveals instead of obscuring the flavor "Pry champagne cool, sweet champagne cold" is perhaps the best rub.

On another point oth passibility of winboing affected by the bottle - this is a worth reading. Everyboly recognizes " corked " write, but it seems not at all im, probable that "bottled" wine may bear a double sense likewise. Certainly there is no known product which differs so extraordinarily from itself as wine, nor any whiel is so so usi ive to rong n's of all sorts. Mr. Webber's method of sarving out curret -not decenting the wire at all but letting it stay forty-eight hours upright in an even ton p rature, than ranging a sufficient numb r of glasses in a row and filling th in all without raising the bottle from the horizontal to the upwright state ets, no decibi, excellent, if you have a sufficient number of compotators. But it is rather claimsy in appearance, and necessitates the sacrifice of that "pushing the bottle," which is a cheerful and agreeable care mony. B sides, a good jug full of good claret is a very pret ty thing; yet we fully grant that no method of preventing the admixture of sediment with any large quantity of wine can be nit upon so e itam as this of, so to speak, d cauting it straight into glasses and we further agree with Mr. Webber that "the finer the win the more acrid the deposit," It is quite surprising to any one, who tries for the first time how positively musty the dregs of a reality good bottle of claret are while the dregs of port, though unph-asing to the eye and disagreeable from the mix thre of solid and liquid, out in suff r little in flavor. We feel considerable doubt ubout Mr. Webber's statement that "purwine if dropped on the tablecloth will not stain it in the least." It it be so, we can only say that there must be uncommunity poor wine in the world.

GROWER OF THE COUNTRY.

The present ratio of growth in this country executs a million of population annually. The Philad-Iphia Record has made an elaborate table showing, among other things, that the actual increase of population for the whole country in eight years was 10,396,503. This result is reached by finding that the total vote cast at the last Presidental election was 11,340. 518. The mercuss over the vote of 1880 was 2,136,020, If then the vote at the recent election born the same relation to the total population as the vote of 1880, it would follow that the figures here set down as the increase of eight years would be approximately correct, and that the total papulation of the United Stat's would be 57.767.843. In round numb is, this pipuldistors is now 60,000,000, and it is probable that the ceusus of 1830 will mer as- this estimate by something more than one million.

864-964; and in 1888 an apparent population of 1,200 128. According to this shows ing, that has been an annual increase of population dornog the last eight years in this State of 54.3 %. This ratio will be mercas diprobably during the next dicade. With the hirgor population as a basis, the natural increase, all distribute of immigration, would bring the population of the State in ten years to about 2,000,000. The innual gam of population for the whole country is, in to relating the T. 4,300,000 Ly u if the aggregate nomating on should to no larger doing the next dies le, at the and of that period, or say in 1900, the popaddress of the United States would not full much short of 75 000,000.

There are two Stat's whose growth has ben nearly alike. These are Minnesota long quotation from M. P lig 8 which is and California. Thus the population of and others commend more the charge of these States in 1880 and eight years later was set down as follows:

		751	1
Minn sot	ı	175 (7)3	1.280,247
Ca i' rui		 ., 504-064	1,220,425

SAVING BONES FOR MANGRE

On this subsect P. D. Bair I writes in the Prairie Fa mer as follows.

"There are but f w farms which have not more or 1 ss tomes, both old and new, lying around, that could be brought into a state of available plant food with little trouble. Mary farmers will not save the bones, from an aversion too taking hold of them, but the man that is to nice to take hold of tones, especially whin he can make such valuable use of them, will not make much of a figure at farming. Wh'n beeves and hoes are killed, it is not much more trouble to save the waste bone's than to let them be, giving the premises an unsightly appearance. It is also as easy to save the bones from the table as it is to throw them around the yard.

Let the farmer car fully collect all these tomes, and when writer comes and he is burning good wood, put into boxes or baricls a layer of ashes and a layer of bones; then another Liyer of ash s and then bones and so on until the vessels are nearly full Then fill with ash s, putting twice as much ashes as bones. Now keep this mixture wet with soap-suds, but not enough to leach through, nor suff r it to freez , as the proe sa will stop while froz n. Now through the winter save also a hopper of good ashes in the same way as for making so in.

When spring comes, and the bones are not dissolved sufficiently, put them into a large kettle filled with lye from the ashes in the hopper, and but them until the lye cuts them up. When the process is done, max with soil to make it better to handle To dissolve bones in sulphuric acid is much the speediest way, but with this greater carmust be observed, as the held is very corrostre. While dissolving in ashes is a slow process, it is supple and a quar some great eare. While the farmer is about his farm work, he is thus making a fertilizer that is of great value. Moreover, the mixture of home and ashes is more valuable as a mornilla

ANTIQUELY OF CHEENE.

Cheese and carding milk are mentioned in the Book of Job. David was sent by his tather, Joss , to earry ten chois s to the camp, and to see how his brethren fared. plies of David's army at Mahanaim during and dynamo, thus gone rating the current

California had in 1881, a population of the rebellion of Absalom. Homer makes necessary to light the building and its cheese form part of the ample stores found grounds by Utysses in the cave of Cyclop Polyphe- a flowing will watch drives the dynamos mus. Euripid's, Theoritus, and the early of an electric light company. The well is parts in intion cheese. Thomas Coghan in "The Haven of Health?" 1584, says: from it is conducted to a reservoir place! "What chiese is well made or otherwise may 30 fe t above the turbine which actual s partly be perceived by an old Latin verstranslated thus: 'Their should be white as snow is, nor full of ey's as Argos was. nor full of spots as Lazarus, nor o'd as Mathu clah was, nor rough as Essid was." Muster Tusser, in his book of Hasbandar add-th, Cother properties also of choise well made which whose listeth may rad Of this sort, for the most part, is that which is made about Bamburis in Oxfordshire, for of all the cheese in my julyment) it is the best, though some prefer Ch shire chiese, made about Nautwich other counties, but Bamburie choose shall go for my money, for therein af it be of the best sort) you shall writher tast, the tenet or salt, which be two speciall properthese of goode choose. Now who is see 4 singus to extercheese, must cut it aft r oth r meate, and in a little quantity. A panny-weight according to the old saying. is enough, for b ing thus used it bringeth two commodities-first it strengthen this weake stomache; secondly, it maketh oth a ment's descend into the chief place of digestion; that is the bosum of the stomach. which is approved in 'Schola Saleria, But old and hard choese is altog thei disallowed, and reckoned among those ten manner of meates which eugender in lancholy, and bee unwholesome for sick folks, as appears the before in the chapter of B cfe." - Analyst.

ARTESIAN WELLS AS MOTIVE POWER.

The discharge of water from artesian wells has for many years been employed as a motive power in France. In the city of l'ones there is an artesian well which drives a dydraulic wheel 7 meters in draueter, and works the machinery of a silk factory At Grenelle the heat of the water issuing from a deep well is utilized in warming buildings. A project is now before a Commission of the Municipal Council of Paris, having for its aim the utilization of the mover of tamable from the new artesian well in the Piace Herb rt, at Li Chapelle, University now three important art sim wells in the Paris basin, that of Grenelli heing the oldest, and that at Passy tamost Productive. The u w La Chap lie well is, however, situated in the industrial quarter of the 18th arrondissement, and is and will adapted for the experiment of producing motive power, B siles these there are a number of private artesian wells to Paris belonging to manufacturies. The La Chap He will was that hid in March last, having been begun twenty-from years ago. It reaches a depth of 720 in ters and the witer, bit to its If, ris steahing a of 35 m tas above the mouta. It birmshes smorenbee in t is of water in twinty box. hours. The proposal is to utilize the power turnished by the well in generating on lidestributing electricity for lighting and in dispurposes. One object in ution d is the lighting of the park of the Battes & harmont, which is situated nor in wel-Before now electricity has being nertid in this manner. At Pone, de Lou ia Florida, there is a hotel having a powerful "Choose of kine" formed part of the sup- arts sian well, which drives a turbine wheel

At Yunkton, in Dakota, there is 600 f et deep, and the water on issuing th dynamos.

PEANIS AND PIANOS.

"This is the time of the year when we ir driv n n mly a 2, with work," said a tired-booking prinost ner to a New York son r port i 2 Ev rybody wants his processing the design of the processing and most of th m forg t about it till the last moment. And basides long the busiest season, we have been having the most trying weather. Thes add, dry days throw planes out of tune every time, and besides that the sounding-hourds are biginning to split, It dways surprises me what poor care most people take of their planes. Let a man buy an expensive watch, and he'll treat it is though it were a live thing, but people don't so in to realize what a delicate piece of mechanism a good prano is. Pranes are not affected so much by heat or co'd as they are by dryness and dampness. Of course, if you stick one end of a plane up against a stove, or a heater, or a register, at I let the other end come near a cold leaky wandow, it'il raise N d with it, but most people are on to that. The trouble is, the prano is too dry.

"You know the sounding-board-the life of a plano - is forc d into the case whou it's mal so tigatly that it bulges up in the cont it or has a "belly," as we call it, ou the same principle as a violin. The wood is supposed to be as dry as possible, but, of course, it centains some meisture, and gathers a lot more on damp days and in handling. Now, when you put a plane in an overheated, dry room, all this incisture is dired out, and the board loses its "belly," and g is flabby, and finally cracks. Even if it doesn't crack, the time loses its rescnane and grows that and truly, and the 6 it cloth and leather us d in the action dry up, and the whole machine ratiles, and everyloody kicks.

"How can you prevent it? Easily enough. Keep a growing plant in the room, and so long as your plant there's your plato ought to, or else there's something wrong with it. Hast try it, and so how much more wat a yea'll have to pour in the down put in the room where your plane is than in any oth r room. Some people k ap a huge vase or ara with a sappaig-wet spong in it near or mader the pinne, and k sport moist nod, jost as a cigar dealer keeps has stock. They keep this up all the tim the fires are on.

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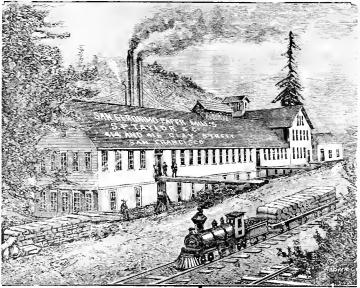
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a Interesting Account of the Wine Industry furnished by the fieneral Italian Wine Gr wers' Association.

[Continue I from page 146]

SICILY.

The wine production of Sicily has from very a cient times been d gr at importance. B fore the apparance of the ordinar, Sicily, b sides supplying win s for home consumption, had a constant surplus pro- and Scogietti; and in some districts of the duction, which was partially exported as must or young wines, to the scaport towns of Italy or to for ign countries, partially stored for some time, and then exported from the island by certain in-reantile establishm uts in Marsala, or distilled.

The greater demand and high r prices obtained for the win share here, as in other in extensive culture already existed, and Italian rigious, greatly contributed to dev-lop the vine culture. But the special facilities which enable the Smillians and non-existed, but from this it must not be Sardinians to produce win s at a smaller and restood that there denote exist in Sicily cost than in any oth r part of Italy, is lorg-tracts of land without vin s. Howdoubtless a very great reison for this ever, Sicily is decidelly the Italian region developm at. The small ram fall during which can and does give constantly the the summ it season invigorates the branches. so quickly as to mak it easy to grow the vine without any kin-lof supports,

Although, where matter is given, the production mereuses, in Stelly this practice. is not necessary, the greater portion of the vines producing abonduntly, is doubled andsince very remote times. While in the northern regions the vinc is principally Simily, with the exception of the districts around Mount Etna, the most extensive sible to make a great saving in the expenses by substituting animal for human laber in vating only one variety of graps, tilling the ground. Finally, the climate instance, at Milazze, the New racy one ty being very mild, permits of a large part of the work of the vincyards being done Mount Eina the North during the wint r and spring thus again almost exclusively grown of Pachisaving very considerable expense. These Calabrese advantages all tend to reduce the vine cul- near Vittoria, Comise, and S

pendent of any other, and it is possible in times of Mose ito vines, the Lipari islands (clarifies the wine in lat the requiring v ry few workm n,

Although throughout the whole island, 1,000 metres high the cultivation of the vine is easy, the districts which constantly produce large quantities of wines for exportation from the island seem to be rath r Smith d.

The larg st or as are obtain d in somparts of the province of M ssing, which xport their wines from Milazzeor Messina. in the neighborhood of Mount Etna, and in that called Terreform, near Catania and Ripostot in some communes which producthe wines known to the trade as Pachine provinces of Trapani and Palerin),

There are also many small r controls which produce fine and common qualities where, however, the quality is r strict d to that required for local consumption.

In recent years the vites have been targely multiplied in these districts where plantations have been expended to the plains and mountains, where, but a few years agtargest quantities of wine for exportation.

While in the North and in a portion of Central Italy the vines are to a large extent cultivated on areas which are scantily water d. in Socily, the natural conditions are so tayorable that, although only a small portion of the territory adapt d for it is ing that they have never received manuficand resultivation, a large samples over what is consum. It is produced every year and this is the r as at why prices in Sicily cultivated on the hals and decryites, in are lower than in any oth r Italian region

Stelly is also characterised by great uniformaty in the style of its wines, which i vin yards are in the plains, whire it is possifivored by their stricted number of vari-+tr s grown, very +xt-usivexclusively cultivated, in the and Nerval Associa

Stelly to cultivate the vines very near each | cultivate the Malvasia, and the Island of preserves it from turning sourch cause when ther over an extensive area, giving to each | Paintell drig the Zibabbo. The Springin vine-) the gypsum is disselved in the wine it vine from 140 to 180 square metres, and gards are almost entirely exempt from the forms, sulpharate of patish -the potash ravages of hailstorms, and cryptogamic being furnished by the wine swhich resists parisites, on the other hand a small much more than the ordinary tartrate of with the exception of a f w summits over mount of irrary is closed in the spring by potash. But, when the quantity of gypsum the highest of any in Italy,

> The Phyllox rachas for six ral years past appeared in Sicily, and naturally it gypsum is unnecessary. has extended. To prevent or limit its cavages, the usual remedies have been employed, or the native vines have been graft- been found most advisable to add small insect. But, notwithstanding the Phyllox- which is obtained from the less. The ra, th re has been until now no decrease n the production; may, in many localities the surplus production is now greater than in past years, owing to the extension of

The preparation of wine has not been d veloced in Sicily at the same rate as the production of grapes. With the exception of the larg establishments, who prepare with great ability and car the Marsila wine, the greatest portion of the production of the island is sold as young wine during the winter season. Generally the grapes are fermented in palmente or canale, which is a kind of a square brick vat in which the grapes are exposed too much to the air and not sufficiently preserved from the atmosph re, a system which permits the wine to take up during the fermentation the germs of future chang s.

The dispense or cellars on a level with well protected from atmospheric changes ! if they are us ful for very strong wines, ! lighter qualities. As it is topossible to esconer in London by than in Sicily, r gulate the temperature and ventilation. The Saulian district which produces the The hot and variable summer have not been previously add.

and other lifticates have origiit ments of France and Spain. It must forth and Prana wan s, both more to half understood that the gypsum quickly and full body I wines

frest, and in the summer by andity. But in the wine exceeds 2 per mille, it is conthe production of Sanhan vineyards, accord [sid red prejudical to health, and for some ing to an average extending over a large years, past an increasing opposition has number of v ars and for large districts, is been going on against triating wing in this The most intellig at growers to coner. n w understand that the employment of

In cases where it is desirous to increase the acidity in the must and wines, it has quantities of pure tartaric acid, a material question of adding gypsum to wines is now being determined in a very satisfactory The export is are paying much bigher prices for wines which have not been submitted to this treatment, and in this manner growers are remunerated for the extra attention and care with which they prepare their win s.

In the provinces of Messina and Pedermo, it is not unusual to fortify n w wince with a small addition of concentrated in 1st to enable the wines to k op under all circumstances, but this practice also is disappearing as the system of wine making improves,

Although Stollin wines are characteris d by a high degree of alsoholic strength, the island produces some good table wines, and to this style, the blending and mixing wines may easily be related,

Strily possess a much higher temporathe ground, g is rally very high and not ture than the provine's of the Pennisula, especially in the winter's as in, yet in the summer season it is often the reverse, and it is by no in any rare for rice to ripen

one the fermentation is not couplet and largest quantity of table was as that th refere the wines is main sweet with a around Mount Eins, where the vine is small percentage of alcohol, and do not entitivated up to 4,000 metris above the sea level. The wines called in that country ison is dang rous for those wines which Rosco, are certainly not inferior to the good ames of the more northern countries. This wines are exported in large quantities at I in Sieny the practice of introducing to Riposto, whith r many other blending speam into the wines, a practic which is whose are conseyed, some are associated to , logt dora the southern dog Catating, which is the market for the Forr

conveyed, the most noted being those of Faro, which may be considered as one of the best table wines of Sicily.

Milazzo and Barcellona produce blending wines only

In the province of Syracuse, consideriog only the wines exported from the island, we must point out two principal districts-the district of Note with the town of Pachino, an immense centre of production, with the port of Marzamemi, and the communes of Vittoria, Comiso, Chinramonte, and Biscari, the wines of which, shipped from Vittoria-Scoglitti, under the name of Scoglitti, are well known, especally in the sea-board towns. The blending and mixing wines are exported from the district of Modica.

While in the eastern provinces of Sicily red wines are most abundant, in the west the white predominate. The provinces of Caltanisetta and Girgenti export only very small quantities, while the province of Trapani produces the universally renowned Marsala, of different brands and styles, the Marsaletta and the Marsala vergine.

The oldest establishments are to be found in the city and port of Marsala, but we must mention that the establishments of Trapani, Maszara del Vallo and Castelbyetrane are daily increasing in importance. The establishments of Trapani have sometimes been compelled to purchase their white wines in other Sicilian provinces. This fact has encouraged merchants to establish factories in other parts of Sicily. for the preparation of the commonest varieties of Marsala wine. This is in foreign countries the best known Italian wine

Besides Marsala, the eastern portion of Sicily supplies the trade with a considerable quantity of white, winea, which are exported chiefly from Castellamare del Golfo and Palermo. Red wines have also now commenced to be produced here on an important scale. Some of them are produced at a considerable height on the mountains. and possess the character of table wines.

The common Sicilian wines, when properly prepared and stored during their first year develop an agreeable bouquet, some times even excessive. Now that consumers in central and northern Europe prefer robust wines, it would be a great convenience if the Sicilians established depots where the wine could be made in large quantities and stored for the purpose of supplying a uniform style, and waiting always until they were completely matured before selling them.

The common Sicilian wines are principally exported to Naples, Rome, Leghorn. Genoa, Marseilles, Cette and other French ports, where they are mixed with other wines and consumed by the lowest class of people. But these wines possessing as they do such intrinsically good qualities are worthy of better treatment, and might easily be transformed into fine and medium table wines, and as such they would be highly appreciated by consumers.

Sicily produces some special wines of a very valuable kind, of which, however, the preduction is on a very small scale. The Muscato of Syracuse, when it is well made, represents all that can be desired by the most exacting palate, and it comperes advantageously with the most celebrated Muscatos produced elsewhere.

The Malvasie of Lipari, the dry and choice Albanelli, the Naccarelle, the Vernaccie, the Calabresi ere far superior to all

To Messina many table wines are also the Forzati, Passiti and Natalini wines which were formerly prepared in many provinces of the Peninsula, and which are still prepared at great expense by a few proprietors.

Some one has also commenced in Sicily the preparation of liquor wines possessing the aroma of spricots, mandarius, oranges, etc. These are specialities which are not consumed at the place of production, but are appreciated and well paid for in the northern countries, where it is customary to drink iced and warmed wines with special infusions.

Sicily also produces good table grapes which are easily transported.

The people on the Island of Pantellaria which is nearer Africa than Sicily, trausform all their productions of the Zıbibbo variety into dried grapes, which are exported chiefly to Marsala, Palermo and Naples, whence they are distributed over the whole globe. This island also grows grapes which ripen early in Jane and July. The Zibibbo of Palermo is a celebrated table grape, which is largely exported.

The distillery of Baron Spitaleri at Solic chiata, in Catania, supplies excellent Cogbacs; other examples of the preparation of fine Eau de Vie or Cognac may be found at the establishment of Ottavi & Morbelli, at Casalmonferrate in Piedmont, at Leune on the Lake of Come (Ing. Vnuessi's establishment).

Sicily, and especially Messina, expor also a considerable quantity of cream of terter

(To be continued)

TRADE TRICKS.

It is often said by captions critics that English people do not know how to make coffee, but, according to a recently issued report from the British consul at St. Petersburg, we are not, says the London News, only eclipsed by continental rivals in the art of preparing the fragrant drink, but also in the art of adulterating the raw material. Here we are familiar enough, or rather much too familiar, with chicory as n substitute for coffee, and, doubtless, most of us have heard of the inventive American who brought out a machine for compressing chicory into the form of coffee berries. In Russia the wary purchaser has to be on the lookout for other adulterants. such as burnt beans, roasted barley and the like. The British consul tells a story of an Odessa grocer who boldly offered a reward to any one who should discover chicory in the coffee he supplied. As a matter of fact, a careful analysis did prove that the so-called coffee contained no chicory; but it proved more, namely that all produce of the coffee plant was equally conspicuous by its absence. The stuff was really nothing more nor less than roasted barley. In a similar way, tea, which is usually supposed to be so good in Russia, is very often made the means of fraud. A common trick is to mix the good tea with other leaves which have once been used and then dried, a practice which has obvious advantages to those dealers who would thereby feel themselves at liberty to say that the mixture contains nothing but tea. But the most usual adulterant is the leaves of the common willow berb, which, after drying, strongly resembles the true produce of China and Ladia.

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In the Tatura (Colony of Vi ctoria,) Agricultural Society an excellent series of competitions has been instituted, which, by stimulating those who have embarked in vinegrowing to greater exertions, will be productive of great benefit to the district. Prizes of ten and five guineas were offered for the best and second best vineyards respectively, the conditions being that the area should be not less than two neres, or more than five years planted. The judges were Messra.T. Blayney, the well-known vigneroo of Nagambie; T. A. Ruttray, manager of the famous Tabbilk vineyard; and John Furphy, sen., a prominent horticulturist of Shepparton. Mr. Darveniza carried off the first prize among several competitions, Mr. Kavanagh being placed second. The 1.port of the judges is valuable reading, as it not only gives the points of excellence which secured the awards, but it also conceys general hints upon selection and manigement that will be found of great use to those who have not had plenty of previouxperience. The report, which we take from the Goulburn Valley Yeoman, we publish in full:

Mr. Darvenize's vineyard is about 60 acres in extent, 32 of which he declared open for competition. The varieties are Hermitage 14 acres, Carbenet or Sauvig uon 8 acres, and the remainder, about 10 acres, Pedro and Muscat. The vines ar planted at a distance of 7ft by 7ft. The cultivation of the vineyard is all that could be desired. The praning is most satisfactory, with the exception that in our opinion the crowns or stools are formed a little too close to the ground. The disbudding has been carefully and well done, and reflects great credit upon the skill of Mr. Dar-

The vines are well grown, healthy and clean, and entirely free from any sign of disease. With regard to the varieties we found in Mr. Darveniza's vineyard, we are pleased to see that he has devoted so much acreage to Hermitage and Carbenet, undoubtedly the very best varieties of red grapes that can be procured, as they produce a most marketable and excellent wine. The Hermitage is regarded as the standard grape, giving quantity and quality. Bat the Carbenet, though not such a heavy bearer as the first-named, is the grape pur excellence, producing a wine of the delicate flavor which may be found in the celebrated brands Chateau Lafitte and Chateau Margot, produced from the same grape known in France from the province (Sanvignon) in which these famous wines are produced. In the Pedro, Mr. Darveniza possesses the very best bearing white grape. and the wine has the advantage of maturing earlier than either the Reisling or the Verdeitho We cannot refrain from remarking the absence in your district of these two last mentioned varieties. The Pedro. though the best bearer, does not produce by any means the best, and regarded commercially, the highest priced wines, its wine being regarded as very inferior in comparison with the Verdeilho or Reisling. The Verdeilho produces a most excellent Madeira, and the Reisling, as its name implies, is the most "noble" of wines. The staking of Mr. Darveniza's Hermitage and Carbenet is all that could be desired, but we consider that he has a great number of vines rising three years old that should have been staked in order to properly train

PRIZE AUSTRALIAN VINEYARDS. require. With regard to the distance we consider that 7ft by 7ft is too close, and that 8ft by 8ft apart is the best distance at which to plant vines. Our reasons for making this assertion are that the distance we have mentioned as desirable enables the vineyard to be most conveniently cultivated by m ans of a three-furrow plow and two horses without injuring the vines. When the vines are planted closer than this the roots get too close together, and nothing is more necessary to the health and strength of the vine than room for the roots to spread and derive sustenance from. Again, in planting closer than the distance we have mentioned there is a danger that the crests of the vines might he in the way of proper cultivation.

> In conclusion we like to make a few remarks on Mr. Darv niza's cellar, though his, as you are aware, is not strictly within air province as judges of vineyards, but we are making these observations in the hope of henefiting those who may follow the C ellent example Mr. Darveniza has set. In our opinion Mr. D. rv niz a would have done ætter if the walls of his cellar had been sigher and cith r felting or refrigerating mint had been us d beneath the iron roofng A cold cellar will keep wine, but a ary low temperature is undesirable where t is necessary to mature wine. Too low a temperature will kill the fermentation formant in young wines. Mr. Dirvenizi's press and vats we find well suited to the size of his vineyard, though we think he would find it an advantage to have the staves of his vats shorter, or in other words to have a larger surface exposed to the air, in order to produce more perfect and equitable fermentation.

The pruning of Mr. Pagan's vines is defective in many ways, and we can arge nothing better than that your enterprising and energetic vignerons should consult practical men before next pruning season as to the best means of getting their vines into a form that will ensure the greatest production at the least cost to the vine. We could not help noticing that the young vines in Mr. Pagan's vineyard are somewhat irregularly planted, and it would be very desirable to see that they are straight. ened. Even in the first season we are of the opinion that the vine requires a temporary stake.

In concluding ou remarks, Mr. President, nnon vineyards brought under our notice, we must compliment your society on having stirred up a friendly rivalry among the vignerons of the district by offering these wellmerited rewards for thrift and perseverance in an industry that promises to become in the near future one of the most important in this prosperous colony. It gives us much gratification to be able to commend the competitors, saccessful and unsuccessful alike, upon the excellent care they have taken of their vineyards. They are all, we feel assured from what we have seen, imbaed with the right spirit, and all they need is a little more experience. This they cannot purchase, and time alone can give it to them. The excellent example set by your association will induce the unsuccessful to consult the successful and in time to become the successful ones themselves. As we have said before, the soil of the district we have visited is admirably spited to the cultivation of the vine; and there is no obstacle in the way of the successful proscention of this most fascinating industry. We would warn your settlers against plantthem, and give the vines the support they ing upon thoroughly sandy soils unless

clayey subsoil is within reasonable distance, wrong in planting vines in a district so perfeetly adapted to the remunerative culture of the vine.

In the varieties enumerated above, Mr Kavanagh undoubtedly possess sithe very best table and raisin grapes. Hes vines are clean and healthy and free from oiscase This last observation, we are pleased to say, applies to all the van yards we have visited in your district, which is most admirably suited to the snecessful cultivation of this t rofitable fruit

With regard to the distance at which Mr. Kavanagh has plant d his vines, we have already said we regard 8ft, x 8ft, as the most satisfactory in every way. Mr. Kavanagh's method of cultivation is very good, the implements he uses being a three-furrow plow and a disc harrow. The latter we may observe is an excellent implement to use when the soil is light and easily friable; but we do not consider it suited to heavy, suff ground.

It is in the method of pruning that Mr. K avanagh, in common with all other exhibiters, with the exception of Mr. Darveniza, has failed. It is a comparatively easy matter to cultivate a vineyard thoroughly and to give it a generally good appearance; but it is in the most inportant point of pruning that the practical vigneron is distinguished and rises superior to the amateur. It is a pity, that with a soil and aspect so nearly approaching perfection, that Mr. Kavanugh did not sock really practical assistance in the pruning of his vines. Awe have said, the same fault is noticeable in the other competitors, with the exception mentioned. In the majority o, cases we have found the crown too close to the ground, and in other instances the vines have been allowed to run into too much wood. These are both most serious faults; and it will take time to rectify them; but it is essential that they should be rectified as soon as possible. The crown of a properly pruned vine should not be less than a foct from the ground. If it is lower than this it involves unnecessary labor and loss.

Mr. Kayanagh, we noticed, in common with the other competitors (with the exception of Messrs, Darveniza and Nickinson), ties up his vines to the stakes with twin-This we regard as an unnecessary expense in two ways; firstly, because twine is more expensive than rushes; and secondly, because it takes longer to tie the twine than the rushes, and loss of time is necessarily loss of money. But the most cogent reason of all against the use of twine is that it will not give to the growth of the sine and ents into the tender shoot. Its use should, in our opinion, be most scaulously avoided.

Mr. Kavanagh, we regret to see, has only disbudded in a very imperfect manner Disbudding we regard as a most essential operation upon the vine. If properly perform dit has a most beneficial leff et, ensuring the maxium amount of fruit with the maximm amount of wood and strain upon the vine, If disbudding is neglected it allows the vine to exhaust its strength in making wood which should otherwise have gone into fruit. The vine becomes crowd. ed with nance ssary wood and foliage. which prevents the free play of air through the branches. Again, it is a much easter and more economical operation to remove them as hard-ned and tough wood in the

saying. "Train up a child in the way it strongly recommend they should endeaver There are easks af branch here profusely But your sand hills are so few and far be- should go," etc., applies to the vine. The to obtain a little of his most valuable expertween that it is almoss impossible to go vine when young is tractable and easily trained, but allow it to run rio' for a few years, producing a great 4 al of weed and very little fruit, and the vin , like the neglected child, will have become entirely unmanageable, and worse still, unprefitable, and is only fit to be dug up, and east out of the viney and,

In conclusion we must say that Mr. Koyanugh's Like Eric Vincyirl is a most pleasing and refreshing sight. The soil is admirably adapted to the cultivation of the vine especially for table with these the aspect is delightful, and the general appearance of the place very attractive. Mr. Kayanagh is exceptionally standed in regard to natural drainage, as vines will stand and flourish with any amount of water at their roots, but soon succamb if the water is allowed to settle on the surface.

MB. GEO. PAGAN -3rd priz-

Mr. Pagan has this year planted out 41 acres of vines, but the area submitted to our inspection was five acres, consisting of two acres of Hermitage, and one each of Carbenet, Chesselas and mixed table varieties. The vines are planted 8ft, x 10ft, and the vineyard is clean and well cultivated. The pruning is very defective we'r gi't to say The crowns are too close to the ground and badly formed. The vines are neatly tred to stakes-although with twine -and very well topped. Disbudding has been almost entirely neglected.

The varieties of grapes in this vineyard are good, and we must particularly commend the Chesselas, the most serviceable of the white grap s. In connection with this grape we would remark that it is invaluable to the vigneron. It ripens earlier than any other variety; and does not gain in saccharine strength by being left on the vine till the very last of the vintage. This we have proved by experience. In identing his vines at irregular distances. Sft. x 10ft.) we are of opinion that Mr. Pagan has made a mistake, and would have done better had he kept the vines equi-distant throughout.

In cultivating, Mr. Pagin uses a single farrow plow and a disc harrow. We have already referred to the latter in our report upon Mr. Kavanagh's vineyard. With regard to the former we consider that its use involves junnecessary labor, unless in certain seasons, and that if a three-furrow plow were substituted it would be found more economical and satisfactory

The form of the casks we can recommend on account of the economy in space, but we would warn vignerous in future to be very careful in ord ring casks, to be sure to obtain a guarantee from the maker that the wood is of the best and well seasoned The demand for casks is so great that the unscruputous manufacturers are tempted to use unseasoned wood, and the results, we need hardly point out are likely to be most disastrons to the unsuspecting vigneron. The cost of these cases should not be more than 61 pd per gallon in M thourns, and experience has fully proven that a capacity of 500 galas the most serviceable. In larger casks the body of the wine is so great that it seems to prevent tining, and very much smaller casks though maturing the wine quicker involve additional lab at and require much more room.

In conel sion, we must compliment Mr Darveniza upon the gineral appearance of his vineyard and cellar, and to those who have already cultivated, and to those who pruning season. The old, and very true contemplate starting as vign-rens, we

I he before planting out their own sine-

Mit. Kananagar 2 and prize 5

Mr. Kavanagh, Lake Erie, has 24 acres onder vines, comprising about 15 acres of Gordo Blanco, 3 acros of Raisin d & Dames, 2 acres of Sultana, and 3 acres of Hermitage. The vines are planted 10ft, by 10ft. The ultivation is good, but, in our opinion shallow. The pruning is defective, the frut, being too near the ground. Mr. Kaything has almost neglected to disbut, and the vines badly want topping, but were all well stak d and neatly and regularly laid

LONDON'S WINE VAPLES

The following interesting descriptions of the disposition of choice liquors in the British metropolis, is extracted from a recout issue of Tid Rits:

The total floor area at the vaults of the London docks is a million superficial feet, and in this space, 83,000 pipes of wine can casily be stored, and then room found for 75,000 casks of brandy. The various vaults are built in the form a crypt. The largest of the se-the east vault-covers four acres of ground, and as we take our light, a small oil lamp fixed to the end of a piece of wood some eighteen inches long, our guide informs us that there are in this cellar alone twenty-one miles of scantling wire, or min, rature railway lines, over which the burrels are rolled.

The roof for vards and vards is covered with a beautiful species of frugus, the growth of which is due to the fumes of the wine, a p-cultarity which is all the more noticeable, as where no barrels find a tem porary r sting place, nottingus grows aloft It is as light as feathers, and takes the most claborate and artistic forms. Small hillocks, gig intic bunches of grapes. long ropes which a puff of the breath will snap in two, while such delicate designs are to be found here as to make the lover of lace envy the patterns. In the midst of all this mushrooms grow, and in the season a good crop is always secured

"The Drawing Room" covers nearly an acre. This is a private vault, scrupplously clean, the sawdust carpet unspotted. It is rented from the company by a well known firm of wine merchants, and as we examine a cask called "The Dake," we learn how testing is managed. The bung of a barrel is never removed for testing purposes, but the attendant has to bore a small hole in the cask, and the wine flows into the "dock" glass. The taster having satisfied himself as to strength, the flow is stopped by the insertion of a small stick of wood. Every hole has to be accounted for, and the total must correspond with the number of thist. ing orders ' issued from the owner's office, Sometimes a whole barrel runs away in tisting.

The brandy collar covers about seven acres of ground and some 21,000 casks are resting there just now, but during the Pranco-G rman war the authorities contrived to provide accommodation for 72,000 closks, All the brandy was driven out of France, its value was \$15,000,000, and an official who h lpol to receive the barr is at the time, has mede an inter-sting calculation that if they had been placed in a line they would have stretched for thirty-four miles. decorated with cobwabs-over twenty years old. One of the gangways is nearly a quarter of a mile long, and in the midst of this hugh collar runs the snow tank, into which all the shince, snow and mud of winter is poured.

The "vatting floor," where brindy is improved by mixing one quality with another, contains some of the targest spirit receptacles in the world, grgantic yellow tubs symmstrically made, on each of which is painted its holding capabilities. Here is one which requires 10,000 gallons of liquor to fill it, another takes 3,000, others 2,110 1,459, 1.500, and 530, something like a thousand gallons of brandy running through the taps every day.

The mixing process has ceased at the moment of our visit, but it is whispered that in another corner of the dock a large quantity of gin is about to be converted into "sweetened." The "sweetening" burrel, holding the modest quantity of 5,070 gallons-into which the gin in its unsweetened state is to be pour d-is on one floor, Above it, immediately over its high mouth is an opening some varils in length, and four inches deep by nine inches wide, and into this a rivulet of gin is flowing from the interrior of five large casks which are emptyong themselves into the barrel below As soon as these are empty, others take their place, and the "vat" filled, the sugar in a liquid state is added the whole mixed together, and shortly afterward it is bottled sent abroad and approved of as the choicest "Cream of the Valley."

A word about the bottling department. As fast as the wine is put into bottles it goeout for export, the number of doz-ns seals ed, labeled, capsuled and packed in cases every day being 400. A good packer can case a hundred dozen bottles between 5 and 11 o'clock in the morning. In the cellar below the bottling room-where, by-thebye, 600 doz-n buttles can be placed side by side on the floor-barrels are kept, and although the cellar is lighted with gas, fifty-four lamps are needed for dark days. nine of these being "Davy's." Here in one corner are the wax pans, the merchants not only having to provide their own bottics and lables, but wax in the bargain. It takes five minutes to melt a pan of wax. It is placed in a copper pan, heated over a gas stove, and when melted is placed in a receptacle containing a small spirit lamp, which keeps the wax in a liquid state, and finally the case is locked,

Southern Cultivator is responsible for the following. Cut the beef in convenient pieces and salt down as usual, a lding a " pinch " of saltpeter to each puces. Let it remain in salt three days; then drain off the bloody brine formed by the salt, wipe each piece with a clean cloth and repack in the tub or other vessel used, a syrup or m dass a cask will answer, but not a whisky barr l. For the brine, take as much water as will cover the beef, add salt until no more will dissolve, a tea cup of ground saltpet r and a quart of melasses, or its equivalent of brown sugar. Boil and skim well, When the brine thus prepared is entirely cold pour it over the beef and keep the latter well pressed under the brine. These propertions are for 200 pounds of bacf. If the brine should mold in warm, weather - reboil and skim it, adding hilf pound of cooking soda, and when rold return to the beef,

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TERRACING PLANTATIONS.

A correspondent of the Scuthern Cultivater, speaking of the numerous suggestions says:

I will give the one I fell upon in the winter of 1882-3. I do so the more willingly because my neighbors like it, and are adopting it.

It looks very nice upon paper, and in the field, to have trees in squares, so many feet each way, and even to go further, and dot the spaces with various kinds of fruits, etc., but whether it is best for preserving the land and feeding the fruit trees, is the upon this by observing the vigor of trees upon roadsides and in fields which had had the benefit of drifts-humus accumulations. I then determined to set an orchard in which every tree would have the benefit of the land drift. I first commenced by rnnning my rows upon a level, and then dropping down the hill far enough to throw my rows the proper distance apart. On this ptan I planted about half of my orchard in the winter of 1882-3.

In the May crop report for 1883, from Commissioner Henderson, I read a short article by Dr. William P. Harden, of Smyrna, Cobb county, Georgia, on terracing. (Let me say here, in my opinion, that short article, did more good for agriculture in the South, than anything and everything that has ever been done in the past fifty years. Mark it!) I at once adopted his suggestion as to the three feet fall, which answered my purpose very well upon rather steep hillside, but when I reached land gently aloping, I had to throw in other level rows between so as to have my rows as near each other as I wished. On some parts of the field, the fall from a given row to the next row below would scarcely reach one foot. Of course my rows would vary in width, according to the land passed over, but I paid no attention to this, but kept on a level line, and dividing the distance between my trees in the rows according to the habit of growth of the variety, and the character of the soil. After trying this a few years, I decided the roots on the lower side could not obtain sufficient nourishment, so I dropped below with my terrace, so as to give five feet from the upper border thereof, to the fruit trees. This allows the planting of a row of corn or cotton between the terrace and fruit row while young, and fuller play for the roots of the trees. I like this plan better for the apple, and also for the peach, except on good stiff clay lands. On such lands, the tetter drainage of the first plan insures loss rot in the peach in bad seasons.

Now, in laying off, I mark my terrace line with a long and very narrow scooter, and set a sprig of the paspalum ovalum grass every twelve inches, any time from the first of May to the first of November but always soon after the furrow is run and has been rained upon. Just six and a half or seven feet above this line, I run a parallel furrow for my trees, or measure from my terrace furrow with a six and a half or seven foot pole to the point I wish to set my tree; now leave a space one and onefourth to one and one-half feet on either side of the terrace line, and the paspalum will, in one or two years' time ao densely and stoutly set the two and a half or threefoot terrace, as to defy floods, and the emigration of soil.

turning plows, for when such break, I think more damage is done than when the line is left level, and we trust time, cultivaand plans given for planting out orchards, tion and a grassy terrace to gradually gather up the humas, level up and enrich the laud. I prefer the paspalum ovatum grass, because it makes a very strong turf; grows so closely as to allow nothing but water to pass through; is a winter as well as a summer grass; grows better than anything I have tried on poor land, does not parch or wither in dry weather; sends out its columns from three to five feet, and can be moved from three to five times each season, thus making the terrace a valuable question. I was first brought to reflect part of the farm, and where there are no trees to be injured, affording good grazing in the winter. Though it spreads very rapidly, it can readily be kept in bounds by the plow, unlike Johnson and Bermuda grass. It ripens seed continuously from June until checked by heavy frosts; they are with difficulty saved, because of irregularity of ripening, so we allow them to full off and germinate, and use the sets to scatter it. My aext choice for the terrace (and I have tried a number) would be our common crab grass, which can be made to thickly set the line by cutting the weeds closely with a mowing blade just as the grass makes its appearance in the fields, about the 15th to 30th of May every sea-

With these, and other grasses to deck our terraces, I don't see what is to prevent us in the near future from retaining all the humus, the cream of our lands, for the benefit of our crops of fruits, cereals, etc., and giving our worn-out hillsides their best and only chance for remunerative recuperation.

SKILL IN CONCENTRATING MA-NURES.

Forty years ago, in treating of guano and other concentrated manures in an agricultural report made to Congress, page 31, 1849, the writer said: "We greatly need additional experiments to test in a reliable manner both the natural capabilities of soils, and the productive power of different fertilizers. The simple fact that 300 pounds of guano often give a gain of twelve hundred pounds of corn, and six hundred of wheat crops, is full of promise in favor of concentrating manures. In hauling out one hundred loads of barn yard manure the farmer carries, on an average, eighty loads of water. Water is very valuable. but it will hardly pay to haul it in carts or wagons to irrigate field crops. The great weight and bulk of manure must be got rid of without impairing its productive power."

Since the above was written and in print, experiments in the United States and in Europe have steadily favored the formation and use of concentrated fertilizers. We import with a surplus of rich land a our doors, ship loads of potash salts, beet sugar and Irish potatoes from Germany, the heart of Europe, where may be seen ten agricultural schools, to one in this nation of farmers. There is nothing pecu liarly sweet in the beet roots, soil or climate of Germany, that our coffee should be sweetened with German beet sugar. This sugar, on which we pay an import of many milli na a year, is composed of water and very cheap carbon. German salts of concentrated strength, and beet without foundation,

I have never thrown up terraces with cake, after the juice is taken out. This cake is not as rich as our best cutton seed cake, but, fed to dairy cows, it yields a profit that tends to give the world cheaper sugar and plenty of it.

The carbon and water that sixty million Americans buy of Germans, partly in the form of starch in Irish potatoes, and partly as beet sugar, comes almost as a free gift to educated Germans from the atmosphere. The Low Dutch Hollanders are probably the only people that equal the High Dutch G rmans in skillful farming. Both are paying land rent at about twenty dollars per acre, per annum. Such rents imply not paying field hands to handle nearly worthless manure. Our costly farm labor, thrown away in the United States, is the weak place in our system of husbandry, It compels the large importations of organzed carbon and water, and the never-ending impoverishing of American farms. The system is radically defective. -- Ex.

DOES FRUIT PAY?

Captain P. T. Adams of Tustin informthe Orange Tribune, that if the fruitgrowers of Southern California would giv three-fourths of the attention to their orchards that the Eastern farmers do to their grain fields and the economy in man aging their properties, the aggregate o pr fits from fruit culture would be unparalleled in the whole world. The Captain has had a crop of English walouts for four years from his forty trees, and says he never sold any crop for less than \$475. He recently sold his last crop of the walnuts for exactly \$531. He watches his trees as carefully as a merchant would his ledgers, he knows all about them -in fact he makes a thorough business of fruit culture. The average proceeds from each walnut tree on his place this season has been \$13 27. The crop was not a very good one, either.

Beside his walnut trees, he has 1000 Naval orange trees, which he looks after with unusual care, and last week he was given a standing offer of two weeks, of \$3280 for the crop on the trees. He sold last year's crop for \$3000 cash down, without picking an orange himself. He has four acres of prune trees that have borne for three years. Last September he sold the whole crop for \$395. He will plant more walnut and orange trees this season. He has spent but \$130 for labor during the twelve months.

Now here is still another practical illustration of what a twenty-acre farm in Southern California in this locality will do under the management of an efficient, wide awake man, We venture the statement that no land owner or farmer or horticulturist east of the Rocky mountains has made such profits from the soil of a twentyacre piece of property at any time since the war. And yet there are some people who will sit about the grocery stores or whittle up dry goods boxes for hours at a time and dolefully tell you that there is no money in fruit culture in Southern California. We insist that there is if the orchardist attends to his business

BONFORT'S Circular says: The rumors that have been going the rounds of the Paris papers regarding the sale of the secret, etc., of the Liquours of the Carthuakill, manures, beet-fields, with agricultural sians to an English syndicate, are utterly

VARIETIES OF OLIVES.

The designation of queen has no reference to size, only the variety, they being round-the others oval-in shape. The olives put up for table use by the Bordeaux bottlers are of several different varieties. The large Spanish olives, known to us as queen olives, are known to the trade as padrones Sevillas. These, by the way, are quite a distinct variety from the other varieties grown in Spain, known as mauzanillas, which are used for making oil, and the gordalles, having much more meat but less oil. The smaller olives put up in Bord aux are principally of French growth and are known as amelleaux verdallas and lucques, the latter called here croscent olives, on account of their shape, and are much preferred to any other for table use. The verdellas have a strong, full flavor, and are much used as sauces to be served vith meats, while the am deaux have a ittle more oil and less flavor. There is also a fourth variety, know cas the piciolies, similar to the amilleaux in charcter, but larger and longer. Olive farcies re amelleaux olives stuff d with anchovies and capers. As a rule, the American trade refers the quien olives, on account of their ze and fine appearance, the smaller siz: wing as large as the largest of the other 'arieties; but in Europe the smaller olives requite generally preferred, on account if their flavor and the finer quality of the neat -American Analyst.

SCGAR NOTES.

The results obtained by nearly all the German sugar manufactories during the campaign of 1887-1888 have already been noticed, month by month, in the Sugar Cane. The few which bring up the rear might naturally be expected not to present the most favorable results. Accordingly we find that the Pakocs's manufactory, with a share capital of M.7000,000, showa a loss of M. 67,374, raising the deficit on the general balance-sheet to M.402,612, while that of Gorchen (share capital M.500 000.) has lost M.2,829, which amount has to be added to the balance of M.64,959 already on the wrong side in 1886-1887.

According to the Prager Zucker-Markt and the Deutsche Zuckerindustrie, a beet sugar manufactory is to be erected in Portugal, the promoters being Germans; the preliminary capital of £75,000 having a!ready been subscribed. This is to form a beginning, trials having shown that Portugal can produce excellent beets. Fiscal arrangements will give the home product an advantage of nearly 10s, per cwt. (?).

The sugar refiners in Canada, or most of them, have had a pretty good time of it for the past two years, some of them having realized as much as 100 per cent. upon their capital stock! The Woodside Refinery (Halifax, N. S.) forms, however, an exception. It has lost all its capital (£120,000) and is owing a large sum to outside creditors.

The Dutsch eZuckerindustrie declares that the proposed premium of 1 cent. per pound on sugar produced in the United States cannot be considered as a bounty on export, but only a favor granted to the 'national production."

In Holland the Cultus-Maatschappij Soember-Kareng has been founded with a capital of fl.594,000 (£42,000), in shares of fl.3,500 (£291), to work the sugar plantation of Soemher-Kareng, in Java.

CALIFORNIA COMPLIMENTED

The total the Times, the workknown London paper, tak s occasion to make the fenowing kinding remarks about the traba Sab Contracts school around a traveling experition which in the Eastern States is after thing attention, for a displays the products of a warm connate in a pluring the two years before, because of the country covered with show. It is a gaint seof mid-summer in the dipin of winter California is a very pushing State and has no intention to hide her light under a bushel, tuchteds and vineyards are cultivated and encouraged, and a Bro now in the Conforma o gislat in it proved to due on these the State and county tax s. Young plantations are not to be assessed as all provements unto they organ to bear, State officials or, vig rously invistigating the cause of vine liseas. In Les Augeles. It is found to be of the same character as that which broke out in the south rn parts and the chief viticultural officer requires alvineyardists to soul specimens where any appearances are suspenses. One ther oughly understood, the care will to lew The dis are affects the villes so as to present tan and is In the one group the vines are eith relead receives . leaves have fan nother avited the stacks on the branches and the fruit has lined up. Although leaft ss, the stack presents a diff rent appearance from the stack that has died in the marked way. Before the leaves fall, there are watery patches, red, brown and silver arey in coor, and small spects of fungus growth on the older branches. The fruit stanks are summaris affected, while the grapes have shrivened up.

In the other group the leaves look as if they had been so rehed along the edg s. beginning at a point on the margin of the leaf and streading inwards. The leaf then turns brown, curls up, and the dead portions show numerous spots of fungus. All the fruit bunches are either destroyed or very much affected; but every part pr - utthe same spots of fungus which can be seen through a un-roscope, but the effort to trace the fung is into the tissue has so far failed. This discuss with which Canfornia is now busying itself, has attacked the most valuable industry in the State, In the yearly review of California industries, the vineyards were shown not to have yielded so much as was expected early in the season-only 17,000,-000 gallons or a million increase over the previous year. Last Adaast the estimate was 21,000,000 gallens, but there followed two weeks of het weather, then a deluge of rain, and by that a fourth of the crop was lost. By countries, the production of wines was as follows, Napa 3,000,000 gallons, Sonoma, 2,500,000, Santa Clara and Santa Cruz, 2 (66) 600; Alamoda and Centra Costa 1.500,000, San Joaquin, 300,000, Fresho, 2,500,000, L s Augeles and seath 3,000,000 Sacramento and north, I tompoon, other countries 1,500,000. Of this amount, at least 4,000,000 gailons and be distilled, producing about son, one gallons of brandy. The balance of 13,000,000 gairons will consist of dry and sweet wines. During the past year ov 17,000,000 gallons have been exported, and there was a home consump-Francisco experted 7,170,534 gailous of wine, and 425,135 gallens of brandy. Searly hast went to New York 3,302,568 ports the shipmouts were 305,572 gallens.

shipped. Calculating on the vines now Of this, no rehereafter. planted and relicating a good grop would Sir to Vert, as it is a renormally called As to red wines, or varieties a lapted to be 25 0000,000 gallons. In wet seasons the though I think it the true Pe Iro America, produce fine red wines, I do not claim to vine is halle to suffer from heavy spring has preven itself to be one of the most vale be a well posted. It so ms as if our highfrosts in the Bay courties, and in the interior low prices for grapes and wines. The erdinary graps average liftom \$5 to \$15 a tor and from \$20 to \$30 f r fits varieties. The price was higher early in the was to think ateron, and when it was discovered that he yield would not be as heavy as |x1 ofd, prices resemptional transfer and twincy hve cents a gulon, for ain a of 1557, California growers will rife in the 126 ray dithe world regarding the value of their produce. We strongly and distincts to pass her wine interests at the Am resu Examina man London, and a high authority n Voiceliture, the San Fair 1500 Man-HANT by to due door articles. Camberna should be or in mind that the fashion will given by Eur prosperatly by England. min she has to pash be rinterests in the district States by shorfir f in rit dene, it will be length for the demand war axed the power of the van yorks to most it. But if Americans begin to druck Conforms win a it European tables, they and assuredly in their return begin to buy Casifornian wans for their own tables, The Prince of Wales is said to have forms I a high opinion of California wines American couktails and such limiks ar rubbish, but America has in California the huest wine-growing country in the wirld. Its m. rit as a wine-grower is being slowly recognized, but not before the vine yar lists | begin pulling up their vines and planting r hards, so hisheartened had they become by the poor reward they received for their laber. It was not the wine that saved the , a deep yellow wine of a strong and chargrapes, but the demand for fresh grapes, and the excellent quality of the raisins. It is to be hoped that California will make a fine display of its fruits and wines at the Paris Exhibition. These opportunities should not be lost, because they bring the wines side by side with the produce of other countries, a comparison California has no can be to dread, but on the other hand every reason to seek.

GRAFTING THE VINE

As the time for this most important operation is again approaching, and I will have to do a good deal of it myself. I will try to tell your readers which will be the process I have determined on, after seven years of experience here: and an Eastern experience dating back to 1.52, when I was the first who attempted it in Misseuri.

I think there will be a large area grafted the coming spring, especially Zinfandel and Charboneau, Mataro and other red found to make good red wines, especially in the Southern counties, where they will, in most cases, be grafted to raisin graps s, as they have had a ready sale and as the raisin outle kas very premising. In the mer-

waith fulth what win grapes. It is a countries the vire soff refrom the sun. The worder we under the first name that it will service in Cabernet France M. Ibec, etc., at a has not been so active this year as to difficult to make it known under any are all shy bear re, and there for chirally ther. It is also also derrine only. College fitable on ugh omber which is the Semallan, or rather a New as to the time and in the deficial grafts. syn rym of the S man, in. The vine is ing. The time is immaterial, though I very hordy, a string grower, and very products that the best access in April. luctive. Two acres of it, six years old, time from the middle of February to the ir due di tweive it as to the acre for me. after it many two the only before. It in lines in despute a regulation as a wine and we that it is a girly wealtr for by ir style cautes, as it starts late.

E count Vent Lingue, Ling Gran It is big green, indeed, being immonsely productive of very bill, ground banches of ten deable or Leavily shouldrod, it makes a very good, sprightly winof the Rivers type, and produces immensy and reven short pruning. One of the hardness, most productive and hand-- in- vin- - I kn a

bur This also seems Sent of the organic to be somerany successful in our Northern sections. It is a good bear r with long growing, a very hardy vine, and makes a very delicate wine of high character. A mixture of Semillion, Surviguon Blanc and Muscaleib de Birbbas are used in France to 17 duce the famous Chateau Yquem wine, of which the S million proluces the largest part, the others being the

Marsin - or Andrew. This is abother immens by productive vine of the Sauterne type. It a rather lat in ripening, making act ristic flavor, and I have no doubt can be a lyantageously idended with other winof a less character; these four varieties combine great productiveness with fine quality and are quite safe to graft to make a very desirable wine. All, except the green Huncarran belong to the Sant rue type, which seem to be more at home here, and preduce better, than the Rieshness, for the latter, we seem not so well fitted in locau on or climate, as they often suffer from coulure, and do not produce wine of so high a character as on the Rhine in good 5: 850BS.

For quality only, it may be odvisable to graft the two following. M anders de Eurole'a's, Museudene, Raisinote, The latter is a shy bear r, even with long pruning hut to used in France i r flavoring the highest class of Sauternes. A small proportion of it would be very desirable for that purpose,

Rollinder. This is the American vine known under that name, also St. Genewine grapes, on soils which have not been vieve. It is an immedse grower productive monch of small banches and berries with very long pruning and produces a wine which som day will rank very high as it possesses the most spicy and high-st flavor known. With this and the foregoing we Northern countries, where rusins are not as can give the flavor and fudness required safe nor as advisable a crep, it will be more in the highest types of Souternes, by a tion of five or six matter gallons. San advisable to graft them with the best white slight quantity blended with the eleve wine grapes. Having experimented with quantity of grapes. All if these are hardy the last mostly, I will give my choice of not suff ring from extremes of cell releat, varieties first, also the reas as why I should tree from sunscald, and will make as degallous wine and brandy, while to foreign choose them. The confus periodicity of smalle wines is we can have. They are course, the same, whether grafting for my choice for grafting, after a good bar small, but yet a large increase over the same or raisin, though the time of doing of experimenting, at least, in this county I perfect care.

proved year, when 25%,45 gallons were the work may lifter in different sections where we think we can make the finest light, dry win s on this coast.

As to red wines, or varieties adapted to est types of red wines, such as Cabernet-

moddle of May will be provided the sel disare kit fermant, which can be dense by always problems, fine wine if well handled. Burying them in a shady place on the north sub- flabuilling, tree or for ein bandles taking care to get 134 7W T it'rs the fit mestread , while ends wented put the tis burn, reversing the cuttings, but a verificathementirely with fite, mede wearth, to keep them moust and fresh. Reverse 2 the cittings will keep the upper buds I rmant and they will not rub if - easily in han ling. Fir the serons I would choose mediam-sized wood, well develop daniesh stjinted and when I have string vite a to graft I would put in eighteen-inch cuttings. By taking fairsize I uttings with well developed fruit buds. I can obtain full half a crop the first wasen, and will avil the superalundant growth of wood on the graft The states 15 gives me the alventage of forming the head of the vine at about the right hought.

Where small stocks are to be graft d, of course wions of two to thro balls will auswir as well, as we cannot count on anythat jik a crop to first wasch. Where full-length cuttings are used, it will be nece-sary to give the graft a good support by a stept stake early in the season.

The grafting can be like at the first smooth parce below the surface, or even above it, if the junction is kept from drying out by hilling fine soil up around the graft. If the stock is sufficiently strong to hold the scion in its place firmly, a chandage or walting to necessary. On the contrary. I believe the strong dow of sap in the vine has a tendency to drawn the graft if scaling-wax is used. Use either one or two series, acc ring to the strength and size of the vine. The simplest and best method I have fund is the common cieft grafting. For further particulars I refer your realers to my book, "Grape Culture and Wine Making in California -tri tgt II was oak F at tit i cer.

PREMEDY FOR THE VINE DISEASE.

The Los Angles Tri & d & recent Lit. says. Vineyardists have been at a as to account for the new vine disease. one thought it was lie to the presence of the papper tree and ther to ever much trrigatien, another to some fungue growth, and we on. The microscope failed to discover its origin. It first manifests itself in the tend rish ats, then the branch wither and last the roots live. The second y ar of the disease on the point causes its sure both. A vigo r n in Poin na, who was bern andraised in Fron , romembered when the discuss appears I in this vicinity, flaving seen it in Europe, and discremember lither mady. Hit ktongs unla form, and she pear, I floor est he, which h mix-1 with sixty gallons if water and there ughly lampe to I each vine with this white in The residence to have been

THE INPROVED METHODS IN CHEMICAL PUMIGATION

A paper read by Prof. D. W Coquillett of Los Angeles Professor D. W. Coquillett of Los Angeles in a paper recently read in that city on "The Improved Methods in Chemical Fumigation," said: The process of fumigating trees for the destruction of insects consists briefly in enclosing the tree in an airtight tent, afterwards filling the tent with a poisonous gas that will destroy the insects without at the same time injuring any part of the et closed tree. The carliest account I possess of any attempt of this kind, is a copy of the specifications for a patent granted to Mr. James Hatch, of Lvnn, Massachusetts, on the fourteenth day of May, 1867. Mr. Hatch's method consisted in inclosing the tree in an inverted sack, and filling the latter with the fumes of tobacco. pepper and other noxious substances, by the aid of a furnace and connecting pipe; but this method does not appear to have been very widely adopted.

Dr. A. S. Packard, who for several years held the position of entomologist to the Massachusetts State Board of Agriculture, writes me that he is not aware that this method has ever been used in any of the New England States, and I can find no reference to its having been used in any part of the States east of the Rocky Mountains, from the date of the Hatch patent up to the present time.

It appears, therefore, that all the attempts at perfecting this method have been made in Southern California.

In the earlier experiments the tent used in inclosing the tree was constructed in the nsnal round or circular form, with a rounded or dome-shaped roof, and was lowered down over the tree from above; it was found, however, that the apparatus necessary for this work, when operated on tall trees, was altogether to awkward or cumbersome to come into general use; to obviate this difficulty, an opening was made in one side of the tent, extending from the roof to the ground, and when this doorway was opened wide, the tent could be put on the tree without being elevated very much; after the tent is on the tree the doorway is clesed by bringing the opposite edges together and wrapping them one around the other, and to facilitate this a piece of gas pipe is fastened to the tent on each side of the doorway, and extending from the roof nearly to the bottom of the tent.

Mr. H.K. Snow, of Tustin, proposes using a tent of this kind, only having two doorways instead of one, so that after the tree has been fumigated sufficiently, the tent can be passed forward off the fumigated tree, and upon the one next to be treated. He proposes operating the tent by means of an apparatus consisting of four posts fastened together at their upper ends, from which the tent is to be suspended, while the lower ends of these posts are to be fastened to two runners, like those of a sled. so that the apparatus can be drawn forward astride of a row of trees. This is a very simple arrangement, and one that most any fruit grower can construct with his own hands and at very little expense,

Mr. John P. Culver, of Los Augeles, n civil engineer, and a very practical man, has recently constructed a tent for inclosing the tree, which, for simplicity of construction and ease of operating, is a great improvement upon anything of the kind from one side, and consists briefly, of two sects than is Paris green.

inverted U-shaped arches, fastened at one side with hinges to an upright mast mountedupon runners. The tent proper is in four sections, and is stretched upon these arches, so that when the tree is enclosed the sides of the tent will rest upon the ends of the branches. The inner surface of the two wooden arches, which are to meet each other when the tent is inclosed, are covered with a thick layer of felting, and the two arches are fastened together by means of a rope and pulleys. This apparatus is a great improvement upon the old way of letting down the tent over the tree from above, and 1 see no reason why it cannot be used upon the largest orange and lemon

After experimenting with a great many different gases, I have found nothing snperior to hydrocyanic acid gas produced by acting upon a solution of potassium cyanide with sulphuric acid.

Much will depend on the comparative purity of the cyanide used, and while it is not necessary that this should be chemically pure, still it should not contain any visible impurities. One of the best tests of its purity is to pour a small quantity of sulphuric acid upon some of the dry cyanide, and if it evolves the gas in the form of a whitish vapor, the cyanide is sufficiently pure; but if it simply effervesces, without producing a visible gas, the cyanide will answer the

The dry cyanide should be kept in airtight packages, otherwise it will lose much of its strength. It is commonly sold in sealed tios, containing one and two pounds each, and should be allowed to remain in these cans until ready to begin operations.

For rendering the gas harmless to the tree, I know of no method superior to that of passing it through sulphuric acid. For this purpose the gas is generated in a closed leaden generator, furnished with leaden pipe leading into the top of a second leaden vessel containing snlphuric acid. Th pipe from the generator should pass nearly to the bottom of this second vessel, and the gas will then be allowed to pass upward through the acid, and by a second pipe will enter the tent which encloses the tree; after this the air and the gas in the tent should be thoroughly stirred, and the tent be allowed to remain on the tree about half an hour

The acid, through which the gas has passed, can be used for generating the gas the next time, and fresh acid should the poured into the second vessel for the gas to pass through.

I will here briefly notice some of the objections that have been raised against the universal ose of this method for the destruction of insect pests.

Firstly, as to the poisonous nature of the gas, and of the chemicals producing it.

While due care, in handling these poisons, should always be exercised, yet, with only reasonable care in this direction, no evil results will follow. When Professor Riley first advocated the use of Paris green for the destruction of the potato bug, people in every direction loudly protested against the use of this poison, saying that its use would certainly result in the wholeaale poisoning of children and farm nnimals, and by being carried by the plant to the tubers themselves, would thereby cause the death of every person who ate potatoes that had been treated with this poison; and ever produced heretofore. It is in the form Letat the present day no substance is more of two half tents, which inclose the tree aucceasfully used against manipulating in-

Moreover, if the process of transmitting the gas from one tent to another should with hydrocyanic acid gas, and almost succeed, as f believe it will, this will great- every fruit grower could raise all the totacly lessen the danger of being poisoned by the gas, as compared with the present method of allowing the gas to escape in the air, as soon as the inclosed tree has been sufficiently fumigated,

It is also claimed that only a trained chemist can manipulate the production of gas; but this is not true, since any person of ordinary intelligence can accomplish this quite as well as a trained chemist could. Of course this part of the work should not be entrusted to any and every person, but this is equally true in regard to the other methods for destroying insect pests, and I am 1 make this assertion that even the best washes that have ever been produced for the destruction of scale insects will, in the hands of eardess and inexperienced persons, give only indifferent or unsatisfactory

In the matter of fumigating orchards, it would doubtless be desirable for certain persons to purchase the necessary apparatus, and then go from orchard, to orchard fumigating the trees, at so much per tree, just as, at the present time, the hay balers go from field to field, baling the hay at so much per ton. Already the cost of the apparatus for operating the tent has been very materially reduced; thus, the tent over the tree from above costs all the way from \$150 to \$300. I am informed that the cost of the Culver fumigator will not much exceed \$100, while the apparatus suggested by Mr. Snow should not cost over \$50.

The only real obstacle to the universal adoption of this method is the present high price of potassium cyanide.

For this I am obliged to pay in Los Angeles from 80 to 90 cents per pound, which puts the cost of fumigating an orange tree, twenty feet tall by fourteen feet in diameter, something like \$1.75 per tree. It has been the rule with every manufactured commodity, that when it came to be very extensively used, its price diminished in the same ratio, and we may confidently expect the same thing to happen in regard to the cyanide; but this is a phase of the question which I must leave to the fruitgrowers for their consideration.

Before closing I would like to give a little experience which I had in fumigating with tobacco. I had an upright earthenware furnace constructed, the interior of which measured about three feet high by eight or ten inches in diameter; this was constructed in such a manner that a Cumming's blower could be attached to it for the purpose of firing up the charcoal, and it was furnished with a pipe for conducting the funes into the tent, 1 filled this furnace about half full of charcoal, and when this had been heated red hot, I threw upon the hot chargoal about four pounds of refuse tobacco stems, connected the pipe. and allowed the fumes to pass into the tent previously placed over a small orange tree; the tent was moved from the tree at the expiration of one hoor, and it was found that all of the Iceruas were dead, as well as were also the black scales, Lecanium olear, and the soft scales, Lecanium hesperidum, but only a small percentage of the red scales, Asidiotuz aurantii, were killed, while the tree was uninjured.

Whether or not this method could ever be used against the Icerya on a large scale, is certainly much cheaper than fumigating co necessary for fumigating and at very little expense.

FIGHTING PHYLLOXERA.

The battle with the phylloxera, which is in perpetual progress has already cost France upwards of £400,000,000, according to the Pall Mall Budget. How do the vinegrowers meet the attack of this terrible little foe, which has cost France such an enormous treasure? It is said, on good authority, that one female "phylloxera of the leaves," born from the winter egg, has, sure your Secretary will agree with me, when at the end of May, laid 500 eggs. The family of 500 produces by the end of June 250. 900 more phylloxera, at the third generation the number would reach 62,500,060,000 and there are five or six generations in the year. These insects go to the root of the matter bidding adieu to the leaves in Jane, and journeying to the roots as rapidly as possible. There are several recognized methods of conducting the battle. Take the one that is adopted on Messrs. Gilbeys' estate in Medoc. First a large quantity of water has to be pumped up from the river, which is distributed over the vineyard by miles of piping, laid methodically along the coarse of the vines. The date for the commencement of the treatment is about the 20th of March, and at that time gangs of men and women are employed preparing the holes (curettes) for retaining a solution of the sulpho-carbonate around the foot of the vine, until the whole has been absorbed by the soil. The pump and tubing having been put in position, the work of the treatment is carried out by six men, each followed by a woman having a supply of from 10 to 15 pints of sulpho-carbonate and a measure holding a little over two ounces. In order to ensure the methodical working of the treatment, the signal to commence is usually given by means of a whistle connected with the steam pump, and each man then starts by filling the cuvettes with a quantity of about two gallons of water, into which is poured the dose of sulphocarbonate of pottassium decided upon, a further quantity of water then being added until the cuvette contains in all from about three and a half to four gallons of liquid.

> Much important matter is embodied in the following rules, published by the Royal Agricultural society, in England:

> Rinse all dairy utensils in cold water. Scald with hot water and rinse again with

Always use a thermometer.

Churn and crenm to be at a temperature of 56 degs, in summer, 60 degs, in winter, Ventilate churn sufficiently.

Churn at forty or forty-five revolutions per minute,

Stop churning immediately the butter comes. The butter should be like grains of mustard seed.

Draw off buttermilk and wash the churn till water is clear and free from buttermilk.

Make a strong brine, and pour into the churn through a hair sieve.

Remove butter and work on a butter worker. Never use the hands.

Messra. A. Ebermayer & Co., pre established at No. 10 Barclay street, New York, as the representatives of the Sierra Madre I leave it to the fruit growers to decide; it | Vintage Company and G. Groezinger.

The Progressive and Wealthy Mctropolis of the Golden West.

In 1542, a little band of Spanish explorers under the supervision of the party, Don Gospar Portola, left San Diego with the intention of going direct to Monterey bay, but not knowing the exact location. they went about seventy leagues to the northward, and wandered for days over and sand hills, viewing with dismay the barren country.

But they were amply repaid for the anxiety and hardships they had endured, for they presently came in sight of an immense sheet of water, lying at the foot of sand hills, and bounded upon its farther side by mountains and slopes of green This is how the harbor appeared when first viewed by Christian eyes, Tying as it were before them, rippling in the sunshine angently washing the shore of the surround ing country; waiting for some civiazed race to come and build their cities on its shores, and their ships to navigate its chan nels. But little did these proud, unfortunate explorers think, as they gazed in admiration on the smoothness of the water, that the tolorn sand hills which presented such a barren appearance, would in a few yea's be crowned with such a progressive American city as that of San Francisco, Nor were they aware of the fact that the interior abounded in gold fields, the production of which was to eventually support the world.

So from somber and desolated surroundings the goodly harbor has grown until it ranks with the foremost sea-ports of the world. It is well sheltered and has a deep broad channel, in which ships can ride and dock with safety. The ships coming in from the oceau, have to first pass through the "Golden Gate," which is a narrow atrait about five miles long, leading from the ocean to the bay. On the left side it is walled with steep and rugged cliffs, which present a grim and majestic appearance, and still farther back lifting his head far above the surrounding country, is Mount Tamalpias. On the right hand side is Fort Point, with her frowning butteries pointing out over the water, at the incoming ships, so that none, but friends may pass within. It is here at night the slumbering city puts its trust, in the hands of the gatekeeper-the Fort, so she may not be intrasively surprised by any foes or armaments that may mean it harm. It is here we see the last rays of the setting san, as he slowly disappears behind the surging waves, into the horizon beyond.

The next most interesting object we observe is the Presidio, lying just behind Fort Point, covering considerable territory, which extends from the water's edge to a good distance above. It is a beautiful spot, with its gradually sloping hills, garlanded with grass, and the level plateaus, covered with little rows of cottages, looking very cosy and home-like, being environed by flowers and shrubbery. The driveways are well graded and nicely kept, and afford a very pleasant drive throughout the grounds. In the distance Alcatraz and Fort Mason are plainly seen; they, too, belong to the Government. Alcatraz contains thirty acres, strongly fortified, and can easily be seen from any northern part of the city. We now find the bay widening ont, and extending as far as the eye can

see. In a few moments more and we will be safely moored at one of the numerous | | docks that line the city front. A half day spent in watching the ships and schooners loading and discharging their cargoes, will be of much benefit to anyone who will stop long enough to consider that he is at the time gazing upon ships of evry nationality; ships that have sailed for many long and dreary days, hattling with angry seas and disastrons storms, that we might enjoy the luxuries of other climes ships that are ready to take our varied prodnets across the wide-spreading ocean to countries on the other side.

Improvements have been going on all the summer, including the addition of sevral new wherees, which consumed a vast amount of capital and labor. In addition to this, she had also the honor of successfully building and launching her first new ruiser, which will be ready to deliver to the Navy Department about March 1st. It is name I the Charleston, is a protected cruisr of 3730 tons, three hundred feet long, authoriz A by Congress March 3, 1887. It was built by the Union Iron Works, at a cost of \$1,017,000. Was not launched until Ju'y last. The battery consists of two 8-inch and six 6-inch breech-loading rifles; four 6-pounders, two 3-pounders, one 1-pounder, four rapid and two gattling guns, and her estimated speed is 18 knots with 7500 horse power.

It will not be long before this harbor

will be the rendezvous of all the whaling flects, which hitherto has been New Bedford. But they are now finding out that this harbor is more convenient, and affords better opportunities in the repairing of their vessels and the laying up of provisions which is necessary for the long voyage. 'ABCHIE."

It is not generally known that the silk in an ear of green corn is a powerful and fficient remedy for dropsy, for bladder troubles and for the diseases of the kid ucys. In the Louisville Medical News we find an account of the medical properttes of corn silk and the cures that have been effected by its use. The way to use it is to take two double-handfuls of fresh corn silk and boil in two gallons of water until but a gallon remains. Add sugar to make a syrup. Drink a tumbler full of this thrice daily, and it will relieve dropsy by increasing the flow of the prine. Other diseases of the bladder and kidneys are benefited by the r medy, which is prompt, efficient, and grat ful to the stomach. The treatment can be continued for months without danger or inconventence.

In Manchester, England, there are a hnndred places where horse meat is sold, and it is eagerly purchased by the poorer classes, it being 10 or 11 cents per pound. while beef is 25 cents.

PICKLING OLIVES

Olive culture in this section is gradually working its way to the front. A Pomona Times reporter last week visited the scene of G C. Muir's olive pickling operations, at his place south of town. He has charge of the white orchard, ast of town, and is progressing finely with the work of pickling. We saw there olives in all stages, from the newly picked to the thoroughly pickled, rich flavore 1. Before beginning operations Mr. Muir visited the Kumball Brothers, at National City, and the famous Elwood Cooper place at Santa Barbara, and studied the methods and plans which are employed in producing their well-known and popular brands of olives. Mr. Muir has now about 1,500 gallons put up in from two to tengallon kegs. He also has 1,000 gallons in the lye vats. The gathering of the entire crop from the seven acres will be completed this week. The yield will be about 3,000 gallons of pickled olives, and those who claim to be experts pronounce them to be far superior to the imported product. They are large and possess that rich, nutty flavor which makes the olive so great a favorite with epicures. Some experiments have been made also in extracting eil, and have resulted most satisfactorily. The process of pickling olives, as well as of making oil, is tedions, requires close attention, patience and work, yet Mr. Muir says he is satisfied that, counting all these things in, the olive will pay handsomely.

EAST BOUND THROUGH FREIGHT.

Forwarded by the Southern Pacific Co., January, 1889.

FORWARDED FROM							In I	POUNDS.
ARTICLES.	SAN FRANCISCO	OAKLAND.	L - ANGELES	Colton.	SACRAMPATO.	SAN JOSE.	STOCKTON.	MARYSVILL
B oks and Stationery	16,220	3,460						
Beaus,	590,770		415,250		287,580			
Barby	336,870				192,020	1,236,570		255,120
Borney and a contract of the c	152,170							
Brandy	17,090	*******	47,920		42,560	1 160		
Copper Censeut	10,120 439,120			60 (00)	101 250	3. 5. 6.		1 1 2 2 2 2 2
Canned Goods	54,950			82,600	104,370	283,630		1,190
Chocolate					******			
Lar4	4,510							
Debing, California Manufactured	23,100				1	: ```		
Coffee, Green								
Pris ani Herbs	12,730							
ftp tioods	15,680	****						
Empty Packages								
Fish Pickled								
Fruit, Dried.,	195,140		5,540	21,170	65,950	59,280		
" Green Deciduous,			13%,600	663,510				
Fase					2,100			
tel te	122		***		3,290			
Holes and annual and annual a			57,1450		21,300			
Hardware	4,650							
Honey	71,740		29,020					
Hojos	49,460				66,070			
Hay a series of a series	10.620	54,420						*****
Her		12 160			09.140	65,700		
Leather		13,460			23,140			
Lumber		29,570	31,190	5 1400	47,570	19,660	5,750	1 1 1 1 1 1 1 1 1
Miscellaneous.			31,130	5,160				3,100
Merchandise, Asiatic (in bond)	253,220	****						
Mohair						3,9 0		
Mustard Seed					111	0,0 0		
Malt								
Nuts			21,310		710	2.110		
Oil Cake					1			1
Ores								
Potatoes								1
Pewder					30,130	22,000		
Quecksilver	.1 1							1
Raisins	96,230		23,800		49,370			1
Race	6,130							
Salmon, Canned								
" Pickled								
reed	18,200				19110	4,260		
Shingles.	301,630				30,15€			
Nick	532,560							
wilk Goods	158,120					***		
Name and Fure	11600		******					
Sugar	4,191,1 0 144,850					****		
Strip	1,127,860							
Tohacco Lorf				****		1 1500		
Tobacco Leaf	22,070		43.920			1,11**		
Wine	1.697,100	2,740	125,580	7,530	363,630	40,750	3,300	
Wool, Australian		2,1417	147,000	1,0000	3/13,030	417,1100		1
" Grease	453,560		33,520	•		10,250		
" Pailed.					94,250			
Scoured	358.250							
** Scoured	358,250 7,280				2,440			
Worden Goods,	7,2%0	<u>.</u>				*****		
Worden toods, Totals,		103 650	1,036,930	779,970	1,427,020		9,050	

Recapitulation.

Marraville Oakland. Los Anzeles Stockton Grand T. J. I 1,427,020 1,750,970 13,254,570 103,650 1,036,933 (9,050 262,710 779,970 18.625.020



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FRIDAY..... MARCH 1, 1889

THE ASSISTANT Secretary of State, Hou, George L. Rives, transmits to the United States Department of Agriculture, a letter from Mr. James H. Smith, commercial agent of the United States at Mayence, relative to the wine product of the Rhine vinevards for the seasons of 1888. Much of it is said to be of a very inferior quality, reported to be almost as sour as vinegar, caused by a very cool and rainy summer. Just before and during the vintage, which was later than usual, the weather was fine, but the air was very frosty, and the grapes acquired an unpleasant taste.

In quantity, the vintage of 1888 was better than that of 1887, 1886, or 1885, A full vintage is about 70 hectoliters of wine per hectare, or about 748 gallous per acre, but there have been only two full viutages in the Rhipegau in the last forty years, namely, in the two sensous of 1874 and 1875. The last year of full quality was 1868, though it was approached in 1886, a year of small product. The wine of 1882 was of a remarkably poor quality.

Nearly all the grapes grown in the Rhinegau are of the Riesling variety. The Oesterreicher (Austriau) is prominent among the other varieties.

The reports from Moselle indicate that the better class of vineyards did better than had been expected, but in poor situations the grapes, with the exception of carefully selected fruit, were better adapted for vinegar than wine.

In Rhenish Hesse must weights of 80° to 90° Orchsle were reached in the case of carefully selected fruit from first class vineyards, but in general weight did not exceed 60° to 70°. On the whole the vintage in this province is pronounced a failure.

On the Nabe grapes grown in the best situations had as much as 18.2 per cent of sugar with an acidity of 10, or in some cases as low as 8, per 1,000, but in general the vintage was small, about one-third of a crop, and the quality poor, the must weight ranging from 60° to 90° Oechsle:

This statement is not a favorable showing of the value of Rhine wines, in comparison with those of similar type made tages, but the lack of old wines up country; injudicious.

in California. The bland and sunny climate of the Pacific coast is in marked conless weather of the North Sea slopes. The development of sugar in the grapes of California is in much larger proportion than in those of the Rhine region, which can only ripen thoroughly, as a rule, on the steep slopes that stand out towards the sun and render his rays practically vertical to the surface; and the amount of acid developed is scarcely more than half the amount found in the Rhine grapes. It is only a sentiment, a memory of some of the better Rhenish vintages, a fancy begotten of a taste acquired, not to mention snobbish preferences for whatever is foreign, that induces Americans to purchase. and pay a customs duty on wines of other countries that are almost as "sour as vinegar," requiring the modification of sugar to make them palatable, when our domestic wines of similar grad-s, from the same European grapes grown under vastly improved conditions, are both abundant and chesp.

Bonfort's Wine and Spirit Circular, in latest issue, gives the following interesting information regarding the Oporto wine trade received from its agents in that city: The total export of wine during the past

year has been much the largest since the introduction of our wines to foreign countries, rather more than two centuries ago,

England still heads the list, and if value be considered, she is much our best customer. Brazil takes a large quantity, principally of consumo wine, and France, during the last four years, has also been a considerable consumer of the inferior grades owing chiefly to the failure of her own vintages through the ravages of the phyllovera

The following is from our vintage report of November 14, last: The vintage this year was quite a fortnight later in commencing than last year, and owing to there being a scarcity of labor, it has occupied a considerably longer time than usual. Many farmers have a large increase, which has agreeably surprised them, while a few others have very little, there being great discrepancies. Taking into account, however, the production of the inferior situations, which is not mature enough this year to be used for export, we come to the conclusion that the quantity, on the whole, will not be very much in excess of that of last. The quality cannot be good, for we had a cold spring and summer, and just before the vintage there were three days of very heavy rain. The vineyards, however, with good exposures have given some nice, pretty wines. Euconraged by the high prices which have been ruling for the last three years, and by the success gained by those who have treated their vines on modern principles, a considerable number of farmers have replanted parts of their old vine-

The demand is still for wines of a light erisp character, which will develop rapidly, and which can be consumed at an early date.

In an interesting article under the heading of "The Douro," in Ridley's Monthly Wine and Spirit Trade Circular, which fully confirms what we wrote last year as to old wines, is the following:

"The chief difficulty with which the Oporto trade has now to contend is, not any scarcity in the yields of recent vin-

these seem almost exhausted. There, of course, still remain large reserves in the trast with the misty and comparatively sun- | shipper's own Armazens, sufficient for their requirements for some time to come, but inasmuch as the same cannot be replaced at old rates, the shipment of certain marks at present prices and quality becomes a serious question."

> Tuere should be no hesitation in appropraiting the sum desired for the sustenance of the Viticultural Commission. The amount is small, in comparison with the benefit the State at large derives from the labors of the board.

The idea of incorporating horticultuie, agriculture and viticulture under the control of a single bureau is absurd, and can only be considered as an attempt to create another political effice. Each branch of the industry is a -cience in itself, requiring years of faithful and constant study to master sufficiently to obtain a standard of proficiency nader which the labor of others can be directed with a certain degree of confidence. Every one is not competeut to fill such a position, and those who are, should certainly be considered entitled to pay for their services.

This has never been the case with the men who have served faithfully and laboriously for years in the Viticultural intersts of the State. Outside of a few clerical positions, the working members of the Commission receive no salaries.

If a meeting of the board is retired, the Commissioner for a district-say at Los Augeles-is notified to attend, he is expected not only to give his time, but also to go down in his pocket for fare to San Francisco and hotel bills.

There should be no discrimination in favor of particular industries. It does not follow that because a man may have been brought up to handle a pick and shovel in the drifts of a quartz mine, that he is justified in sneering at another who may prefer to watch his grape vines budding in faithful promise of the coming harvest of fruit and wine.

The more peaceful pursuits of life interest the many, and from time immemorial, they have received attention and careful consideration from law-makers of every nation

It should further be remembered in dealing with the opposition to this bill that Camminetti, as a salaried official of a dedepartment at the State University, is directly interested in belittling the Commission to the end of bringing about its absorption by the Berkeley institution. This gentleman should have been the last member of the Assembly to accept a position on any Committee appointed to investigate and report on the merits of the Commission. It is also a noteworthy fact that his was the only voice raised against the wine industry, and the institution which has for years been working hand-in-hand with the grape-growers, for the development of one of the most important resources of California.

The gentleman at the head of the Experimental Station at Berkeley, would certainly be better employed attending to his official Permitting his clerk, whose services in civil life are valued at \$70 a month, to interfere with the business of an organization, of which it is reasonable to presume he is jealous, is both impolitic and

M. SANCHEZ FACIO, civil engineer and special inspector for Lower California, appointed by the Mexican government, has issued a pamphlet entitled "The Truth About Lower California", which gives particulars of the contract made by and between the Mexican government and the " Mexican International Company of Colouization," as demonstrated by the official reports of the author. It also refers at some length to alleged frauds committed by the International Company under the protection and sauction of the present administration of Mexico.

"The selling of the National territory to a company at the rate of eight cents an acre," he says, "through the compliance of cirtain insignificant stipulations, and not declaring forfeited the contract upon which the sale is based, in spite of the manifest demonstration that it has been violated, and that the rights of many citizens have been trampled upon, is equivalent to a deliberate attack upon the constitution of the country and unfetters the nation in its obedieuce." Facio further charges that the International Company has swindled Messra Dickie and Darrah in selling them on February 12, 1886, the Tia Juana Valley, which is alien property, and afterwards, in September, 1886, attempted to awindle Yra Carpenter by offering to dispose of the same property to him. He also tells how, uoder the "deceit and oppression" of tha company, San Quintin, which in November, 1887, was a flourishing colony of between 300 and 400 people, is now almost depopu-

THE DELINQUENT tax list of Los Angeles county for the fiscal year 1888-89, amounts to about \$500,000. This is principally doe ou outside lands, where future cities wera mapped out at the rate of one hundred a day during the boom, as health resorts for Eastern tenderfoot. The olive and myrtle cuttings have not yet marked out the graceful windings of the avenues and choice villa sites, an untimely cold spell, which froze the mercury and turned oranges into miniature caunon balls, frightening the one-lunged residenta so badly, that with one accord, they hied them to a more equable clime in the northern citrus belt, content to save their lives at the expense of cash deposit. Prairie dog- have again assumed possession of their former haunts, from which temporarily banished by the surveying cohorts, while the financiers of the county figure out some means of advation from mortgages based on inflated values.

THE BOARD of Trustees of the Mechanica' Institute makes the preliminary announcement, that the twenty-fourth Industrial Exposition will open at the Pavilion, on Larkin street, on Tuesday, August 27th, 1889, closing on October 5th. A carefully revised premium list, with the rules and regulations will be ready for distribution at au early day.

THE SWEDISH Rectifying Company which " has been a powerful competitor of German shippers in Spain, and which recently dropped \$750,000 owing to unfavorable changes in Spaoish regulations on alcohol, has been re-organized with a capital of three times as large and will continue to rectify high wines from Russia and the German provinces.

Subscribe for the MERCHANT.

by the Statistician of the Department of Agriculture, the season has not been favorable to cane sugar and production is limited. in consequence. Sugar planters are now considering with interest the evolution in augar making promised by the diffusion process. Hitherto the business has illustrated conspicuously the wastes of American agriculture, as scarcely more than half of the saccharine contents of the plant has been obtained during a century of development of the industry. The sorghum crop varies in different sections, but may be considered a medium crop. It is a valuable resource for syrun for local use, supplementing the supply, though little used in cities. It has not yet paid its way as a sugar plant, no factories having as yet proved self-sustaining without government nid. A hopeful feeling is prevalent that, through diffusion and other aids to manufacture, its ultimate success will be assured Beet sugar is apparently on the eve of extensive production in California, if the enterprise of Claus Spreckels is as successful as it is represented. One factory that at Alvarado, has been in successful operation there for a dozen years.

AT A RECENT meeting of Napa wine men, the subject of the Viticultural Commission was thoroughly canvassed. The work of the Commission in the past was commended in the highest terms, and the belief expressed that the wine men of the State could not afford to let it be abandoned. In view of the opposition likely to be encountered, especially at the hands of the Governor, it was deemed advisable to draft a resolution and present it to the Assembly and Senate, asking for the appropriation of \$17,500, necessary for the sustenance of the Commission. A committee appointed for the purpose, presented the following resolution which was mnanimously adopted

Resolved, That our representatives in the Senate and Assembly be instructed and requested to urge the usual appropriation to the State Viticultural Commission, and it possible increase the same, believing as we do that it is the duty of the State to assist an industry destined to be in the near future one of the greatest factors in the wealth and welfare of the State of California.

A NEW CULTIVATOR is now finding much favor among the vineyardists in the central counties of the State. It consists of a series of steel disks with serrated edges. These disks are saucer shaped, and are fastened to and turn with the axle. The axle is divided in the middle by a hinge, so that the two sections rest at an angle, with apex pointing to the rear. The edges of the circular disks dig up and turn the soil some what as a plow does, only upon a similar scale. As the exle is in sections, higged, the angle may be reduced as to make the width taken in as marrow as may be wished. So the machine can work between even the narrowest rows of vines. The one on axhibition turned a strip of ground five feet wide; and about seven acres per day arcultivated with it. There are strips of iron auspended between the disks in such a way as to act as clod breakers, and a seeder is attached when so ordered. It is a pulverizer-a sort of compromise between a plaw and a harrow, and, as may readily be seen, is very useful and practical.

The importantions of foreign wines into pures and the port of New York during the month of securish about January, amounts to 87,317 gallons and explosion.

According to the annual report issued by the Statistician of the Department of grieuthure, the season has not been favorable to came sugar and production is limited a consequence. Sugar planters are now onsidering with interest the evolution in larger making promised by the diffusion rocess. Hitherto the business has illustrated conspicuously the wastes of American agriculture, as scarcely more than half of the saccharme contents of the plant has

The Ne York agents of a celebrated importing firm, in a little book just published called "A Bottle of Champagne," say that in regard to the temperature at which the wines hould be kept and served, great agnorance prevails in the United States. A wine of fine quality should never be need, unless champagne frappers wanted, to a temperature below 30 Tahr, nor nived with neon need water, for excessive rold destroys both the bonquet and the delicate vinous flavor, while its natural lightness will not admit of dilution.

THE TOURTH annual review of the honey and bosway business of California by Schacht, Lemeke & Steiner of this city, contains much interesting information to producers and consumers of these articles. In 1888 there were between 50,000 and 60,-600 haves in the State, from which were sold 3,000,000 pounds of extracted honey and 500,000 pounds of comb honey. Of this amount, \$75,000 went to England and Germany by water, and 1,000,000 pounds were shipped overland to New York. The review concludes from its statistics that 4,000,000 pounds of California homey can be sold at a satisfactory profit to the producer yearly.

Accounts) to the Weiner Medicinischen Blactice. Dr. Lewin describes a new local and sthetic destined to supplant cocaine. It is of African origin, and is found in the shap of a red mass called hayah. A minute portion placed upon the tengue ereye renders the organ utterly devoid of sensation. Chemically it is a glucoside. The source of this wenderful medicine is said to be a plant described by O rtel in the early part of this century under the name of Erythraftenic particle, from its use in the savinge trials by the order of opison. Pucific Modical and Society Journal.

ALTERD SASDERSON, the well-known Wine Growers' and Importer agent, of 196 La Salle-Street, Chicago, has entered into partnership relations with Mr. Alfred E. Pore, the firm her after transacting business under the name of Sanderson & Dore. Both gentlemen are well and favorably known among the wine growers of California.

We extend to the new firm our best wishes for its success.

A strans-based introok place recently in New York, resulting in the death of two men. They were engaged in the manufacture of cream of tartar, attending a centrifugal, used for drying the various materials of which it is composed. The machine was making 1,350 revolutions a minute, when it exploded, spreading death and frightful injuries among the employees. So far no one se insable to account for the cause of the explanary. A courte of interesting specimens have just been received at the rooms of the Viti-cultural Commission. One of these is the stump and roots of a vine which had did from the black-rot, and another is a graft of a Lemon scion upon a Mission root that was affected with phyllevera. The perent roots are thoroughly diseased, and seron has sent down a root of its own in search of sustenance.

The values of wines and liquous expected from the Counsular district of Lyons to the United States during the mouth of December 1888, was \$6,309.97, against slapmouts valued at \$9,553.70 during the same mouth in 1887. The total expects for the quarter of 1888, were valued at \$37,006.10 against \$23,770.81 in 1887, an increase during 1888 of \$43,235.29

Health says the latest enre for that aunoying and very common affection, persparing feet, is that pronounced by the German army surgeons, and ordered by the Wor-Minister of Germany to be kept in the army medical stores for the use of soldiers suffering from foot aiment, or from sorciess in riding. The preparation is two-parts of pure salicylic neal combined with 100 parts of best mutton suct, and this continent is applied to the feet.

The properties of alcohol in Trance is considerably larger than last year. Since the 1st of October it has amounted to 340, 900 barrels of 46 American gallons, of 1880, against 316 000 barrels last year. The consumption during the same menths has only increased 12,300 barrels.

WHOLESALE MARKET.

Quotations given are for large lots to the whole sale trade.

(Althornia assiss.)

Halves, Quarters and Egyttles, 25, 50 and 75 centifigher respectively than whole hox process

Sugar Quotations

California Sugar Refinery price list dated January 30th. Circle A. Pat Cube, $6_{-4}v$ Circle A. Crushed, $6_{-4}v$. Fine Crushed, $6_{-6}v$. Extra Powdered, $6_{-4}v$. Dry Granulated, $6_{3}v$. Confectioners' Circle A. $6_{-4}v$. Extra C $5_{-4}^{3}v$. Golden C. U.c. Star Pirps. Syrup, in bbls., $17_{-4}^{3}v$. In f. do., 20v. 5-gall kegs. 25v; 1 gall tims, 35v. per gallon.

Price list of the American Sugar Refinery dated January 30th: Extra Fine Cube, in bbls, 6%c; Circle A. Crushed, 6%c, Extra Fine Crushed, 6%c, Extra Fine Powdered, 6%c, Lytta Fine Powdered, 7c. Dry Granulated, XX 6%c. Dry Granulated, 5%c, Confectioners' Circle A, 6%c; Extra C, 5%c; Golden C, 4%c, American Golden Syrup, in bbls, 20c per gallon.

Subscribe for the MERCHANI.

ABSINTHE

A recent number of Te Pantheon de UT destricted Pants contains the following interesting account

"The name of Pernod is so intimately associated with the origin and progress of the industry of absinthe, that it is difficult to separate the history of the one from the other.

The chair of absulate, the name by which the product was known at first, was a pharmace utical preparation, used in affections of the digestive organs and the bladder. It is said that the inventor was a French doctor by the name of Ordinaire.

The district of Pontarlier is now represented in the Chamber of Deputies by one of Mr. Ordmane's direct descendants.

Another authority says that the clixir of absinthe was first known in France a few nutes from Pontorlier, and that it was first mode by the menks of the Montbenoit monstery, so that it is probable that Dr. Ordinare obtained the precious receipt from the monks.

Lyiled into Switzerland for political reasons, he established himself at Couvet, and practice I there medicine and pharmacy.

The Armoise absinthe is a very common plant in this part of the country: so the doctor applied himself to the preparation of the chur, whose virtues he exagorated without doubt, for he gave it as a paoacea for all viis. It did, however, possess very remarkable curative properties, which procured for it a great success.

After the doctor's death, his secret, carefully kept until then, passed into the hands of his governess, who sold it to the daughters of Lieutenant Henriot. These ladies seem to have devoted themselves to the regular manufacture of the clixir, but on a small scale.

Cultivating the precious plant in their own garden, distilling it with their own hands, they delivered occasional pots of the clixir to itine rant peddlers, who distributed them among the population for many miles around.

The secret of the clixir of absinthe hecame in 1737 the property of Henry Louis Period, grandfather of Louis Aifred Perned, the present head of the house. The chair, which soon afterward received the name of extract, was not at first manufactored in large quantities. The building where the new born industry was installed is still to be som at Couvet; it is a mere hovel pierced by two skylights for windows and measuring all told eight metres in length by four metres in width and four metres in height. This modest edifice, eriolle of the inagnificent industry now so well known, serves at present as the washhouse for the hot lil Ecu de France. The invalids, who enjoyed the effects of the · lixir of absinthe, did not fail to perceive that it possessed an aroma and flavor much more agreeable than certain cordials of excellent repute. They accustomed themselves to drink it without netually needing it, people in hea'th instated them, and the reputation of the clixir, or extract, extended far beyond the limits of the Canton of Nonebatel.

Owing to the growing taste of the French for the Swiss cordial, Henry Louis Pernod resolved, as the French treasury was levying very high duties on Swiss absinthe, to tound a factory at Pontarlier, without abandoning the one at Couvet," KRUG CHARLES.
Krug Station, St. Helena, Napa Co., Cal. Producer of fine Wines and Brandies.



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M. Denicke, Fresno: DEAR SIR-The figs sent to me to San Jose are very fine, and nothing has yet been produced in California to come any way near them. * * Enclosed are orders for twelve additional cases. JOHN ROCK,

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TO NEW YORK.

MARKS.	SHIPLYES	PACK OFFS. AND. CONTENTS	GALLONS	A 47 CR
TPG	Lenormated I res	Brarn's War	81	870
Rev L J D ,,,,,		1 and War	50	21 25
A V Co	C's hilling A Co	25 it work Wine	13, 152	1,325
J A C		3 two-Wee	. 34	98 67
II T	15	A Lagrad War v	17	25
M & Co	Ov Fluid Fan LP Ca	Start Is With		233
	A threenbaum & Co	15 hards Wine	711	202
A C	B Drevfus & Co	20 Jorgels Wine,	117.1	500
E V B in diamond	Lactman & Jacobs	35 barr b Wine.	1.777	571 240
L K		51 care With	2 622	1.055
K & F		227 tyrrels Wite		6,300
T (2)	Frapoli, Barkes & C.	25 are's Wine	1,280 765	765 233
G	J Girmilach & Co	. 14 barn's Wine		
L&C	1 to 1 to 1	2 half barre's Wine	713	587
W in diamond		10 are 8 Wine	172	379
Total amount of Wine			36,251	815,87

TO CENTRAL AMERICA.

B II, t hamperico B Drevius & Co (14 kegs Wine	140]	8125
B B, La Libertad Bloom, faruch & Co. Ht cases With		40
2 harris W to	444	35
C H, San Juan del Sur Horace Itax & Co 2 larre's Wine		1 1
P I furry Wine	491	42
Y F P, La Libertail J T Wright A Co 6 kegs Wire	(93)	45
L&S, Champerico		282
B H, Champerico J Gundlach & Co 70 cases Witte		326
-		
Tetal amount of Wine, 110 sees and	2118	508

TO MEXICO.

J.M. Mazatlan W Loaiza	1 to red Wins	633	832
D F & Co, San Blas Thomas Ball & Co	Zaraka Witte	133	106
A. L. Acapulco	There's With the same	142	73
	G helt-born Is Wine	155	115
TH, San Blas	Tions Wine	1.7	
Y D G, Mangamilla Cabrera, Roma & Co	A kees Wind	42	~1
G & Co, Tonals	TO cases Willer		50
R.P. san Benito		110	475
D & M, San Blas Thannhauser & Co	. The Wine	46-3	46
R II, San Benito	5 tarrels Wine	169	124
Total amount of Wine, 10 cases and		1,245	\$1,193



TOWELL MOUNTAIN VINEVARDS

tate Viticultural Commission, recently in ompany with Commissioner Krug, visited ae Howell mountain vincyards, with a iew of examining some vines that it was ared were affected by disease, Mr. Theeler made a careful examination of any of the vineyards on the mountain, ut failed to find any trace of disease of any ind. He pronounces the vines of that ction in a healthy and promising condion. The spots that it was feared were ffected, were in places where trees had en taken out, and the sap from the reads at remained in the ground had soured the oil, temporarily checking the growth of the ine. The earth, he thought, would soon psorb this sap and in a short time its offect onld pass away, leaving no permanent jury, Mr. Wheeler is enthusiastic over owell mountain wines, which he proounces very superior, especially the relines, which have better color than any has seen elsewhere this senson,-St

LOUE OUT FOR HIM. -For the protection of hotel keepers and others, Messrs, Thur-Chief Executive Officer Which r, of the ber, Whyland & Co. request us to state that one F. N. Tschudi, traveling in the West, is not authorized to represent them. - American Grover



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Description of the Blueberry.

The Blueberry is a valuable fruit, and is a reliable fruit to grow in our northern States where the more tender varieties of fruits winter-kill. It is perfectly hardy, having States where the more tender varieties of truits whater-kill. It is perfectly hardy, having shood 10 degrees below zero without showing any it jury to the most order buds. It ripens in this latitude about the 1st of July, and is beene in clusters like currants; shape, round; reddish purple at first, but becomes a bluish block when fully ripened. The flavor is equal to the insplicitly, a very midd, rith subcaid, premeated by most people delicious. It may be served with sugar and cream or cocked same, and is splendid for winter use. The plent scens to flourish in all scils, and is a prolific bearer. It grows very stocky and makes a nice hodge. The shimming dark green leaves and the blue fruit making a plensing centrast. The demand for the fruit is great, and usually brings 15 cents per quart. They commo nee bearing the first year after setting out, and yields a full crop the second and third year after setting out. They are propagated from suckers and root cuttings. The plant is about the height and size of the cutrant bush, and very stocky, holding the fruit well up from the ground. Plants should be set in the full and spring, in rows two or three feet upant, and five or six feet between the rows making a refer to deep and more records in the full and spring. rows, making a perfect hedge, and no grass or words should be allowed to grow between

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THE SCALE BUG

A scale-bug is a bark-louse. A bark ouis is a coccus belonging to the subsord-r soccide of the orier homoptera. They ire p cultar in the female hever having wings, only boing able to crewl; therefore heir spread from tree to tree, and orehard to orchard, is measurely star, excipt the provisions of this for each the residue when carry d by lands, will be and even on other us ets. The mid sore highly organzel delicate or after a provil d with attiple wings. They are permaran the adult state by having no feeding or dig strug orgaus, their only part in life being simply to impressate the female, but as a larvaand crysa id they food on the same as the female. Since of these scales ar two or three broad d in the year others only one . the habits of all are very mach the same When the young barkshow hatch from the egg they are provided with six begs with which they can travel around briskly, and being very minute and light are often carri d from the to tree by winds, brigger small they are soldom noticed. The young lice, after moving around from y for a time select a suitable place, insert their look into the cutiels of the bank, leaf or fouit and begin for hing by section, as we call it, tion shed their larval skin, and all their members, such as legs, etc., assuming a grab form and thin remain stationary the females at last during the rest of their existence, gradually growing over themselves a scale covering for protection. Such scales are generally of the conor of the bark of the tree, rendering them its conspicuous, but in oth r cases markedly different, such as white, red. etc. In due time the male scales, which are always much smaller than the female, gives forth the perfect wing d mides, which perform their functions, then die at one . After impregnation the f males increase in bulk very fast, this bulk bing in the form of eggs, which in some spicies are produced in great numb rs-600 to 500, in other-, 50 to 150, and 200 to 300. This in ditime hatch out minute bark-line to go through the cycle D. B. Weir in the bard and Garden

OLIVE OIL IMITATIONS.

The following act to "prohibit d ception in the manufacture, importation or sile of oil" was introduced in the State S hat on January 14th

Section 1. Wholev r. by hims if or by his agents munufactures, imports, wills, expos s for sale, or has in his possession with intent to sill, any oil sibstance or compound made in imitation or somblance of olive oil, or as a substitut for olive oil, an l n it exclusively and wholly pure ouveo ', o containing any fats, oils or gr ascor other foreign substances, unless the words comitation obv. oil," or adult rated save alare stamped 1.beled or marked in panels letters of plain is man type, is to a set that one such in I nigth, so that said werds can not be easily diffic I upon the tip and side of every cask, can, I the package or other ree ptacle out ming said article. substance or compound

Section 2 Whosever, by Limsed or by he ag ute violates the provise us of this act, in whole or in part, shall be guilty if a misdem-anor, and shall be punished for each and every a parate off na by a fine of not less than on- handred dollars nor more than one thousand dollars, or by imprison-

ment in the man ty july of the county wherein said person or persons shall be tried, of not less than one month nor more than she year, or by both, such his and imprisonment in the derition of the court pr nomength wather, mechal of whole an shall be poult the person or persons formishing the said to of the said clusty

South By Carts I guerd a sales of the react ship have pursherror of acas a arising under this act, and then jur isdiction is horely extended as as to enable h mits entire the pincity for by im-

Source 4. This act shall take of ct immodiately

TO WINE -MAKERS!

15. undersigned big to me, the attention of Wine Makers, Dealers, et at emerinering rits of Chevalli r-Apperts

OENOTANNIN."

is a corrective and a purificr to all light Table Wines. White and Red.

Its morits are best stated as follows .

I. Being used at the time of crushing the grapes into must;

It righat s and s cars the perfect fermentation of the must into wine.

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The wine being fred of all disturbing elements it promots its perfect development for a and bouquet, of matural strength and aroms.

II. Being used on fermented wines before the second Clarifi-

It calms and regulates the second form-intation of young wines.

It'r stores the natural tannin of the wines which may have been lost or impaired by imported form ntation or

natural eller and aroma, proporing and assisting them for tho bough clarifieldien, premoting their development and improvement in or them for earlier aroma, and right

Director is for Use on Applications

Firsde in the of 215 its carb, by

CHARLES MEINECKE & CO., SOLE AGENTS.

KILLING SQUIRRELS

this month will save much time and trouble.

Many ways have been used in this Stat. to keep the squired down. Traps will do fresh and green; also that made from olives shall applied that pullie schiel fund will an agh for an occasional lone squired, which are been dried. The two oils differ but respare altogether too much labor whom as to a slightly bitter flavor that is found in they are present in quantity. Two or one and not in the other. Mr. Goodrich three years ago the "smokers" became further stated that he had applied to the viry popular, and from cylinders of a great. United States Government for authority to many lescriptions; all formshed with some place samples of the Quito olive oil in the apparatus for blowing smoke into the squire, American exhibit at the Paris Exposition rel holes, wer off red in every direction, and have it brought into competition only The lightning-like way in which all these with oil from olives raised under similar contrivinces have disappear I is proof. enough of their ineffictiveness. As one man put the case, "P was far simpler to olive of the hills," said he, " and if my oil dig them out and kill them with a club," It required two men to run a smok r with any degree of speed, and what with carting around the machine, the fuel, an I other incid ntals, very little progress could be made. In addition to this, the machines generally burnt out after about three weeks use, and cost more to repair them than th viver were worth in the first place.

The carbon bisulphide gas as remarkably effective, and there is no possible durger to stock from its use-with the possible ex ception of the man who used it. It is quite disagreeable to use however, is very costly, and can be very easily wasted.

We have never found anything gives much satisfaction in the long run as the pr pured poison wheat. If this is used in reasonable quantities, either on the very edge or just inside the squirrel-hole, th squirrels will eat greedily; there is little risk of killing off birds and practically no risk at all of injuring live stock, as the grain soon becom a so scattered that what any one animal bigger than a squirrel could it streightens, and developes their get held of would be little more than a The Only Viticultural Paper m dignal dose. The material is ch ap. it our be distributed by one man, and does the work as completely as anything wo know of. There are a veral brands on the market, some of which are perfectly us bas. At the Southern farm we have gen- Devited to Viticulture. O ive Culcraffy used Wakelee's, and it has done very good work. - San Leader Reporter.

THE MERCHAT IS the only recognized 314 Sacramento St., San Francisco wine journal in the State

rich of the Quito Olive Farm, stated yester-This is the very bost time of the year to day that he will exhibit this year five varieties kill off these posts. A little expense in of olive oil, labeled similiar to the Italian method of designation according to seasons, There will be the oil made from the olive wh niti- first brought in from the trees. conditions. "There is a great difference b tween the onve of the plans and the

The San Jose Mercury says E. E Good-

from olives of the plains was compelled to compet- with European oil from olive trees grown on hid-land, where perhaps tree . have been bearing for 200 years, it would not be just. If they make the distinction between that from the hillsides and that from the plains, I am willing to have the omparison male, and even honorary mene ton from such a source would be a triumph for the American olive."

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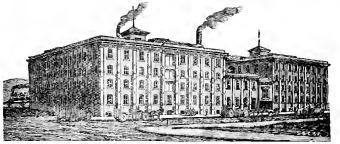
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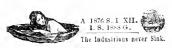
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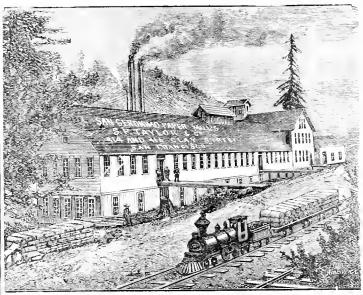
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